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FINANCING THE STEEL INDUSTRY

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APOLOGISTS for stock exchanges have advanced various arguments to justify the maintenance of our exchange machinery. Many of these arguments have been carefully analyzed, but the contention of exchange officials that stock exchanges provide industry with capital has not been thoroughly explored.[1] In some instances the argument is stated in just this form; in other instances the connection between prospective capital funds in the hands of investors and industrial investment is traced through the active markets made possible by the operations of speculators. Implicit in the writings and testimony of stock exchange officials is the thought that without the operations of stock exchanges, industry would have difficulty in securing new capital funds.

Financing cannot ordinarily be effected directly through the stock exchanges since the listing rules of these exchanges call for seasoned and widely distributed issues. Therefore the financing function can only operate indirectly through the play of economic forces which are mirrored on the stock exchanges and which thereby facilitate the selection of successful companies by purchasers of securities. In order to complete the argument it must be assumed that savings will seek new investment in the companies thus favored on the exchanges. As a result one should expect companies to follow financing policies adapted to take advantage of this relationship between market action and new investment.

One method of studying the influence of exchanges on the financing of industry is to investigate the types of financing followed by important industries over a period of years.[2] The purpose of the present study is to investigate the financing of the steel industry during a twenty-two year period, 1915–36. The major emphasis in this study will be placed on the types of financing used, with possible relationships between stock exchanges and the financing of the steel industry given secondary emphasis.[3]

The steel industry was selected for study because: it was a relatively mature

[1] For statements of this argument, see Simmons, E. H. H., *Financing American Industry*, New York, published by the New York Stock Exchange, 1930, pp. 9, 274; Meeker, J. Edward, *The Work of the Stock Exchange*, rev. ed., New York, Ronald Press, 1930, p. 15. For criticisms of this argument, see Twentieth Century Fund, *The Security Markets*, New York, Twentieth Century Fund, Inc., 1935, p. 22; Hardy, Charles O. *Risk and Risk Bearing*, Chicago, University of Chicago Press, 1923, p. 129; Simpson, Kemper, *Securities Markets and the Investment Process*, *American Economic Review Supplement*, March, 1938, pp. 42–3.

[2] Some studies have been made in this field but have been mainly concerned with individual companies. See especially, Flynn, John T., *Security Speculation*, New York, Harcourt, Brace and Company, 1934, pt. II, chp. II.

[3] It is admitted that exchanges play some indirect part in the financing of industry. See Twentieth Century Fund, *The Security Markets*, New York, Twentieth Century Fund, Inc., 1935, pp. 64, 340; Steiner, William Howard, *Money and Banking*, New York, Henry Holt and Company, 1933, p. 366; Hardy, Charles O., "Recent Developments in the Theory of Speculation," *American Economic Review Supplement*, March, 1937, p. 265.

industry throughout the period of study with, in consequence, a wide choice of financing methods; rapid technological and geographical changes occurred during the period with resultant abandonments of old and purchase of new equipment; and the securities of a substantial number of the larger units in this industry are listed on leading exchanges.[4] Two considerations determined the choice of the period 1915–36: availability of data for individual companies and amount of financing. Very little financial information is available prior to 1915 but since that date an increasing amount of data has been made public with respect to steel companies. Between 1915 and 1936 the companies studied added approximately one and two-thirds billion dollars of net worth and bonds to their capitalization.

PROCEDURE

The procedure followed throughout this investigation was adopted in order to emphasize changes in the financial structure of the industry rather than changes in the financial structure of individual companies.[5] The financial data used were first compiled by years for individual companies from consolidated financial statements as reported in Poor's and Moody's Manuals and supplemented wherever possible by the published annual reports of individual companies. The data included year-end figures for bonds, preferred stock, common stock, surplus, and surplus reserves.[6]

The second step was to compute yearly changes in the data and to classify changes in securities into retirements, sales, stock dividends, and exchanges of stock. Data available to permit this classification are in many respects inadequate and some arbitrary assumptions have therefore been made. Thus, it has been assumed that throughout the period the total of bonds exchanged for securities or physical assets has not been of significance. What little evidence could be found justifies this assumption. Further, all net decreases in securities are assumed to have resulted from cash retirements, although such decreases have in some instances resulted from exchanges of securities within the same company. From the standpoint of the companies involved, this procedure results in an overstatement of the amount of funds paid out for retirements and received through the sale of securities but does not impair the accuracy of the net figures for the combined classes of securities.

One assumption was also made regarding surplus. The classification of surplus and surplus reserves was not always exact and it was impossible to determine consistently what part of surplus changes came from such factors as paid-in surplus and revaluations. The assumption was made that all increases in surplus had resulted from retained profits, an assumption which probably overstates the part played by retained profits in financing. To offset this, at least in part, surplus reserves were frequently found to be com-

[4] For data regarding technological changes, see Daugherty, Carroll R., de Chazeau, Melvin, G., and Stratton, Samuel S., *The Economics of the Iron and Steel Industry*, New York, McGraw-Hill Book Company, Inc., 1937, chp. 8. Also see addresses, Irwin, W. A., "Changing Trends in the Steel Industry," delivered before the American Iron and Steel Institute, New York City, May 26, 1938; Taylor, Myron C., "Ten Years of Steel," Extension of Remarks at Annual Meeting of United States Steel Corporation, April 4, 1938. For discussions of geographical changes in the steel industry see Vanderblue, Homer Bews, and Crum, William Leonard, *The Iron Industry in Prosperity and Depression*, New York, McGraw-Hill Book Company, Inc., 1926, pt. II; Wright, C. E., "The Geography of Steel; Factors Governing Location of Main Producing Areas," *Annalist*, May 14, 1937.

[5] The ten largest of the companies studied represented approximately 75% of total ingot capacity of the United States for the first two periods, and 80% for the last two periods. The eighteen largest companies represented 86% of total ingot capacity in 1935.

[6] The dollar values for bonds and stocks represent the par values of par securities and the book-values of no-par securities, after deducting treasury stock.

bined with valuation and liability reserves, and changes therein could not be included in his study.

The final step in assembling this information was to classify the individual companies studied on the basis of aggregate gross plant plus current assets and to combine the yearly changes in net worth and bonds by groups of companies.[7]

FINANCING, 1915–18

The years 1915–18 were characterized by large additions to plant and current assets and to surplus and reserves but there was little actual financing by means of securities.[8] Two factors account for this: the difficulty of selling new industrial securities during the war period and the large profits made by the steel industry. Profits available for dividends for the four years 1915–18 represented 7.0, 18.6, 13.0, and 7.7 per cent of gross plant plus current assets. Table I summarizes the changes (increases and decreases) in securities, surplus, and surplus reserves that occurred in this four-year period.

The increase in preferred stock was due to the sale of two large issues and to the exchange of a small amount of stock for other steel interests.[9] Most of the increase thus represents new financing. For the common stock, however, stock dividends and exchanges accounted for approximately 70 per cent of the total increase with sales accounting for the balance.

TABLE I

SUMMARY OF INCREASES IN NET WORTH AND BONDS, 1915–18[a]

(millions of dollars)

	Companies by Value of Assets[b]				
	U.S. Steel[c]	*100–500*[d]	*20–99*[e]	*2–19*[f]	*Total*
Increases in:					
Bonds	−44.4	108.3	−1.8	1.6	63.7
Preferred	0	30.0	10.5	.5	41.0
Common	0	45.4	25.7	4.0	75.1
Reserves[g]	135.2	52.8	1.1	.8	189.9
Surplus[h]	331.7	72.4	32.2	2.3	438.6
Totals	422.5	308.9	67.7	9.2	808.3

[a] Decreases are shown (−).
[b] Gross plant plus current assets as of balance sheet dates for the year 1918.
[c] The United States Steel Corporation has been treated separately in these tables because of its size and because of differences in financing methods of this company compared with the others.
[d] Four companies: Bethlehem Steel, Colorado Fuel & Iron, Republic Steel, Crucible Steel Co. of America.
[e] Five companies: Pittsburgh Steel, Sloss-Sheffield Steel & Iron, Inland Steel, American Rolling Mill, Gulf States Steel.
[f] Three companies: Stanley Works, Atlantic Steel, Keystone Steel & Wire.
[g] Includes only surplus reserves.
[h] Includes all reported surplus balances.

Total bond sales were large, amounting to \$122.3 million, while retirements amounted to \$58.6 million. If stock dividends are added to surplus and reserve changes, the total representing retained profits is approximately 84 per cent of the total change in net worth and bonds. The dependence of these companies on security markets was thus very slight.

FINANCING, 1919–23

The years 1919–23 were characterized by a continuous expansion of fixed assets while the results of the liquidation movement beginning in 1920 appeared largely in the current assets.[10] Profits were smaller

[7] The aggregates of gross plant plus current assets were used as most closely approximating the parts of total consolidated assets used in the steel industry. There are, obviously, certain inaccuracies inherent in such a classification due to the fact that at least some of these figures may include assets which have no application to the steel industry. However, it seems a better basis of classification than either total assets or net worth. The principal balance sheet items omitted under this method are "investments," "other assets," "deferred charges," and "intangibles." The assets omitted represented 4.4% of gross plant plus current assets as of balance sheet dates for the year 1935.

[8]

	1914	*1915*	*1916*	*1917*	*1918*
Percentage changes in:					
Gross plant	100	112	121	132	139
Current assets	100	133	191	314	343

[9] All exchanges of stock for securities or tangible assets are considered together. Such exchanges represent merely a change in ownership rather than the raising of funds to be invested in steel properties. Funds raised through the sale of securities may, of course, have the same final result except that the new stock is held by different interests.

[10]

	1919	*1920*	*1921*	*1922*	*1923*
Percentage changes in:					
Gross plant	100	105	109	112	121
Current assets	100	103	83	79	93

as compared with the previous period and profits available for dividends for the five years 1919–23 represented 5.7, 5.9, 0.0, 2.6, and 6.8 per cent of gross plant plus

TABLE II

SUMMARY OF INCREASES IN NET WORTH AND BONDS, 1919–23[a]

(millions of dollars)

	Companies by Value of Assets[b]				
	U.S. Steel	*100–500*[c]	*20–99*[d]	*2–19*[e]	*Total*
Increases in:					
Bonds......	−55.6	81.4	6.6	2.6	35.0
Preferred...	0	13.9	16.9	6.1	36.9
Common...	0	153.1	37.2	2.2	192.5
Reserves[f]...	123.4	63.6	−2.5	−1.5	183.0
Surplus[g]....	45.9	−16.8	−5.3	5.3	29.1
Totals...	113.7	295.2	52.9	14.7	476.5

[a] Decreases are shown (−).
[b] Gross plant plus current assets as of balance sheet dates for the year 1919.
[c] Three companies: Bethlehem Steel, Crucible Steel, Republic Steel.
[d] Nine companies: Colorado Fuel & Iron, Inland Steel, Cleveland-Cliffs Iron, Pittsburgh Steel, American Rolling Mill, Sloss-Sheffield Steel & Iron, United States Cast Iron Pipe, Otis Steel, Gulf States Steel.
[e] Six companies: Keystone Steel & Wire, Superior Steel, Stanley Works, Scullin Steel, Atlantic Steel, Ludlum Steel.
[f] Includes only surplus reserves.
[g] Includes all reported surplus balances.

current assets. Table II summarizes the net changes in securities, reserves, and surplus for this period.

For the period 1919–23 the net changes in securities overstate the actual new financing accomplished through the sale of stocks and understate that accomplished through the sale of bonds. A total of $26.7 million of preferred stock was sold, with $13.8 million added through exchanges and dividends, and $3.6 million retired. For common stock, $31 million represented sales, $5 million retirements, and $166.5 million stock dividends. Bond sales totaled $136.2 million and retirements $101.2 million. If stock dividends are added to surplus and reserve changes, the total representing retained profits is 82 per cent of the total net financing and is approximately double the total security sales.

FINANCING, 1924–28

The two periods remaining for study can be given more thorough consideration than the two preceding periods for the reasons that data are available for a larger number of companies and the classification of balance sheet information is more exact.

During the period 1924–28 gross plant totals showed small but consistent increases while current asset totals remained relatively constant.[11] Profits were reported each year with profits available for dividends representing 4.4, 5.4, 6.0, 5.6, and 5.7 per cent of gross plant plus current assets. Table III summarizes the changes in net worth and bond totals.

TABLE III

SUMMARY OF INCREASES IN NET WORTH AND BONDS, 1924–28[a]

(millions of dollars)

	Companies by Value of Assets[b]				
	U.S. Steel	*100–800*[c]	*20–99*[d]	*2–19*[e]	*Total*
Classification	*I*	*II*	*III*	*IV*	
Increases in:					
Bonds...	−70.9	1.6	67.2	5.5	3.4
Preferred	0	44.0	−14.3	5.5	35.2
Common	203.3	32.1	22.9	5.2	263.5
Reserves[f]	22.7	−8.4	3.5	1.8	19.6
Surplus[g]	−102.5	50.2	63.1	18.4	29.2
Totals	52.6	119.5	142.4	36.4	350.9

[a] Decreases are shown (−).
[b] Gross plant plus current assets as of balance sheet dates for the year 1924.
[c] Six companies: Bethlehem Steel, Youngstown Sheet & Tube, Jones & Laughlin Steel, Crucible Steel, Republic Steel, Wheeling Steel.
[d] Ten companies: Colorado Fuel & Iron, Inland Steel, American Rolling Mill, Cleveland-Cliffs Iron, Pittsburgh Steel, United States Cast Iron Pipe, Sloss-Sheffield Steel & Iron, Otis Steel, Gulf States Steel, Sharon Steel Hoop.
[e] Eleven companies: Stanley Works, Follansbee Bros., A. M. Byers, Keystone Steel & Wire, Scullin Steel, Superior Steel, Acme Steel, Laclede Steel, Eastern Rolling Mill, Atlantic Steel, Ludlum Steel.
[f] Includes only surplus reserves.
[g] Includes all reported surplus balances.

The data in Table III show the net changes which occurred in the stock, bond, and surplus accounts but do not reflect

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[11]

	1924	*1925*	*1926*	*1927*	*1928*
Percentage changes in:					
Gross plant......	100	104	106	110	113
Current assets...	100	101	106	100	107

the net financing accomplished during this period. Sales and retirements of securities, exchanges of stock, and stock dividends all influence the net changes in securities but have different effects on net financing. Thus sales of securities are treated as a source of new capital while retirements of securities are treated as reducing the capital available for the industry. Securities issued in exchange for other securities effect changes in particular types of securities but do not involve net financing. For example, common stock exchanged for preferred stock would be reflected as an increase in common and a decrease in preferred stock but from the standpoint of new financing these changes cancel and can be ignored. Likewise, the issuance of stock dividends results in an increase in securities but unlike the exchange of securities also influences the amount of net financing. Such new financing, however, is the result of capitalizing retained earnings and the resultant changes in securities need not be considered. Table IV summarizes the types of financing followed, excluding exchanges of stock, and Table V shows the changes expressed as percentages of the net worth and bond totals of the respective groups of companies.

Table IV indicates that United States Steel financed expansions and bond retirements from retained profits. Companies in Group II approximately balanced bond sales and retirements, and of the added funds one-third came from retained profits and the balance from the sale of stocks. Companies in Group III raised funds through bond sales and retained earnings to provide for expansion and to retire stocks. Companies in Group IV financed themselves largely through retained earnings. For the combined companies, retained profits accounted for 80 per cent of the net financing and were approximately equal to security sales.

The changes in securities, reserves, and surplus, related to group aggregates (Table V) show how the different groups of companies were changing the composition of their capitalizations during this period. Changes in preferred and common stocks were not large enough to be especially significant but changes in bonds and sur-

TABLE V

PERCENTAGE INCREASES IN NET WORTH AND BONDS, 1924–28[a]

Classification[b]	*I*	*II*	*III*	*IV*
Bonds	−13.9	.4	99.9	42.0
Preferred	0	5.0	−4.1	7.3
Common	11.6	3.6	6.6	6.8
Reserves	1.3	−1.0	1.0	2.4
Surplus	−5.9	5.7	18.2	24.3
Totals	2.3	9.4	34.4	41.1

[a] Changes in preferred and common stock, reserves, and surplus represent aggregate changes, as shown in Table III, expressed as percentages of the aggregate net worth of the combined companies in each size classification; changes in bonds as percentages of total bonds of each size classification; changes in totals as percentages of total net worth and bonds of each group. The year 1924 is used as the base year. Decreases are shown (−).

[b] See Table III for basis of classification and list of companies.

TABLE IV

SUMMARY OF FINANCING, 1924–28[a]

Classification[b]	*I*	*II*	*III*	*IV*	*Total*
Financing:					
Bonds sold	0	63.8	80.6	13.9	158.3
Bonds retired	−70.9	−62.2	−13.4	− 8.4	−154.9
Stock sold	0	80.5	4.5	22.1	107.1
Stock retired[c]	0	− 4.4	−22.4	−22.2	− 49.0
Surplus[d]	123.6	41.8	80.4	24.9	270.7
Net Financing	52.7	119.5	129.7	30.3	332.2

[a] Decreases are shown (−).

[b] See Table III for basis of classification and list of companies.

[c] Preferred and common stocks. Excludes stock exchanged directly for other securities or operating assets, and issued as stock dividends.

[d] Includes surplus reserves and stock dividends.

TABLE VI

SUMMARY OF INCREASES IN NET WORTH AND BONDS, 1929–36[a]

(millions of dollars)

	Companies by Value of Assets[b]				
	U.S. Steel	*100–1,000*[c]	*20–99*[d]	*2–19*[e]	*Total*
Classification	*I*	*II*	*III*	*IV*	
Increases in:					
Bonds.....	−357.9	106.7	11.1	−8.1	−248.2
Preferred...	0	42.7	18.3	−8.9	52.1
Common...	158.7	204.1	−25.6	4.2	341.4
Reserves[f]...	−288.8	113.9	−4.2	0	−179.1
Surplus[g]....	−157.6	90.0	−18.8	0	− 86.4
Totals...	−645.6	557.4	−19.2	12.8	−120.2

[a] Decreases are shown (−).

[b] Gross plant plus current assets as of balance sheet dates for the year 1929.

[c] Nine companies: Bethlehem Steel, Youngstown Sheet & Tube, Jones & Laughlin Steel, Crucible Steel, Republic Iron & Steel, Wheeling Steel, National Steel, American Rolling Mill, Inland Steel.

[d] Thirteen companies: Cleveland-Cliffs Iron, Pittsburgh Steel, Otis Steel, United States Pipe & Foundry, Sloss-Sheffield Steel, Spang-Chalfant, Gulf States Steel, Sharon Steel, Alan Wood Steel, Allegheny Steel, A. M. Byers, McKeesport Tin Plate, Stanley Works.

[e] Fourteen companies: Granite City Steel, Continental Steel, Follansbee Bros., Keystone Steel & Wire, Acme Steel, Carpenter Steel, Ludlum Steel, Scullin Steel, Laclede Steel, Eastern Rolling Mill, Superior Steel, Atlantic Steel, Apollo Steel, Milton Manufacturing.

[f] Includes only surplus reserves.

[g] Includes all reported surplus balances.

plus were important for companies in Groups III and IV. These two groups accounted for 60 per cent of bond sales but for only 14 per cent of bond retirements and their additions to surplus and capitalization of surplus through stock dividends were important both in relative and absolute amounts. Significantly, total changes in each group show consistent increases as the size of the companies decreased.

FINANCING, 1929–36[12]

During this period gross plant first increased sharply, 1929–30, then by small amounts while current assets decreased to a low point in 1932, then increased through 1935.[13] Profits were low and profits available for dividends for the seven years 1929–35 represented 7.0, 3.4, −1.5, −3.2, −0.8, 0.8, and 2.4 per cent of gross plant plus current assets. Table VI summarizes the changes occurring during this eight year period in net worth and bonds.

Sales of securities were much larger in this period than in any of the previous periods studied. However, retirements almost equaled sales and the depletion of surplus and reserve balances resulted in a decrease in total net worth. Table VII summarizes the types of financing employed by the different groups during this period, and Table VIII shows the changes indicated in Table VI related to the respective group totals of net worth and bonds.

Tables VII and VIII indicate declining

[12] Asset and profit data are incomplete for the year 1936.

[13] Percentage changes in:

	1929	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*
Gross plant	100	112	115	115	114	115	117
Current assets	100	92	78	64	66	69	77

TABLE VII

SUMMARY OF FINANCING, 1929–36[a]

(millions of dollars)

Classification[b]	*I*	*II*	*III*	*IV*	*Total*
Financing:					
Bonds sold.................	7.3	330.5	44.5	2.6	384.9
Bonds retired..............	−365.2	−223.7	−33.4	−10.7	−633.0
Stock sold[c]................	158.7	284.3	9.3	12.2	464.5
Stock retired[c]..............	0	− 74.1	−51.9	−22.3	−148.3
Surplus[d]..................	−446.5	218.1	−19.6	5.1	−242.9
Totals..................	−645.7	535.1	−51.1	−13.1	−174.8

[a] Decreases are shown (−).

[b] See Table VI for basis of cassification and list of companies.

[c] Preferred and common stock. Excludes stock exchanged directly for othersecurities or operating assets, and issued as stock dividends.

[d] Includes surplus reserves and stock dividends.

capitalization for all groups of companies except Group II. The experience of companies in Group II is markedly different from that of the other companies. Financing was accomplished through the sale of stocks and bonds in excess of retirements and through retained profits. This group of companies was able to increase net worth and bonds by more than one half billion dollars, 40 per cent of this being made available through the retention of profits while the other companies as a group were reducing capitalizations.[14]

The significant points in Table VIII are the important reductions in bonds, reserves, and surplus of United States Steel, the relatively important additions to common stock and bonds of companies in Group II, and bond retirements by companies in Group IV.

TABLE VIII

PERCENTAGE INCREASES IN NET WORTH AND BONDS, 1929–36[a]

Classification[b]	*I*	*II*	*III*	*IV*
Increase in:				
Bonds..........	*	26.5	22.0	−54.2
Preferred.........	0	2.9	4.7	− 8.0
Common.........	8.0	13.9	− 6.5	4.2
Reserves.........	−14.6	7.8	− 1.1	0
Surplus..........	− 8.0	6.1	− 4.8	0
Totals.........	−28.6	44.0	− 4.6	−18.2

[a] See Note (a) Table V for explanation of columns. The year 1929 is used as the base year. Decreases are shown (−).
[b] See Table VI.
* United States Steel Corporation retired the major part of its bonds during 1929, the redemption amounting to several times the ending balance for that year. Bonds outstanding as of 1936 represented but 46 per cent of the total outstanding as of 1928.

SUMMARY OF FINANCING, 1915–36

Over a period of years, the net change in securities and surplus is important as indicating the funds placed at the disposal of an industry. Statistics of sales, retirements, dividends, and exchanges of securities throw light on financing methods but the important point is the amount of new funds brought into the steel industry through increases in securities and surplus and not paid out through retirements. Table IX summarizes the data shown in the preceding tables and indicates the percentages of net financing accounted for by retained profits and by sales, less retirements, of preferred and common stock and bonds.

TABLE IX

PERCENTAGE INCREASES IN INVESTED FUNDS, 1915–36[a]

	1915–18	*1919–23*	*1924–28*	*1929–36**	*Total*
Number of companies studied	*13*	*19*	*28*	*37*	
Net changes in:					
Bonds[b].......	7.9	7.5	1.0	142.1	−10.2
Preferred[b]....	5.0	5.0	7.3	−4.3	6.7
Common[b]....	2.8	5.6	10.2	−176.6	27.4
Surplus[c]......	84.3	81.9	81.5	139.0	76.1
Totals.....	100.0	100.0	100.0	100.0	100.0

[a] Excludes stock exchanged for other securities or operating assets. Decreases are shown (−).
[b] Sales less retirements.
[c] Includes stock dividends and surplus reserves.
* Percentages of decrease in total net invested funds.

The point must be kept in mind in reading Table IX that the data for the different periods refer to a varying number of companies. The percentages shown in Table IX are included only as indicating

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[14] One factor which may to some extent account for this difference in results is the emphasis on the production of light steels by companies in Group II. Six of the companies in this group are important producers of light steel, with 65% or more of total capacity suited to the production of light steel. See Miller, S. L., "The Steel Industry in Prosperity: Record Breaking Demand for Light Steel," *Annalist*, May 28, 1937. The following relatives for selected years give some indication of the different expansion policies followed by light and heavy steel producers.

	1924	*1927*	*1930*	*1933*	*1936*
Percentage changes in:					
Gross plant plus current assets;					
Heavy.........	100	107	107	104	104
Light..........	100	107	183	178	218
Profits available for dividends;					
Heavy.........	100	113	134	−150	66
Light..........	100	151	291	−145	248
Net worth and bonds;					
Heavy.........	100	103	102	92	83
Light..........	100	112	166	157	184

Companies included classified as heavy steel producers are United States Steel, Bethlehem Steel, Jones & Laughlin Steel, Pittsburgh Steel, and as light steel producers, American Rolling Mill, Crucible Steel, Inland Steel, Gulf States Steel, Otis Steel, Republic Steel, Sharon Steel Hoop.

the types of financing followed by the steel industry.

The net addition of funds invested in the steel industry through the sale, less retirement, of preferred stock was a fairly consistent percentage of total net financing. The percentages are not, however, sufficiently large to be of much importance. Likewise, common stocks represented but small net additions to new financing in the first three periods. The large sales of common stocks in the years 1929–30 lifted this type of financing to a predominant place in the period 1929–36. However, the use of bonds during the period not only did not provide net financing but the excess of bond retirements over bond sales represented a drain on the financial structure of the steel industry.

TABLE X
PERCENTAGE INCREASES IN NET WORTH AND BONDS, 1915–36[a]

Classification[b]	*I*	*II*	*III*	*IV*	*V*
Increases in:					
Bonds	*	70.8	145.6	130.4	195.5
Preferred	0	9.2	10.1	8.6	−5.3
Common	23.2	30.6	19.4	13.7	28.4
Reserves	0	15.6	0	−7.3	6.0
Surplus	7.5	13.8	22.9	43.2	8.2
Totals	−3.4	69.6	66.3	53.3	55.1

[a] Decreases are shown (−).
[b] Companies are classified according to gross plant plus current assets as of balance sheet dates for the year 1935. See Table VI for list of companies. The classification in Table VI has been used here with the exception that the last six companies shown as included in Group IV are here classified as Group V.
* United States Steel's bond retirements were too large to be expressed as a percentage of 1935 bonds outstanding. During this 22 year period, bond sales totaled \$7.3 million, retirements \$536.1 million, net change—\$528.8 million.

For the period as a whole, and for each of the first three periods, retained profits in the form of surplus, reserves, and stock dividends, were of outstanding importance. Only in the period 1929–36, when steel companies were reporting operating deficits and writing off large losses against reserves and surplus, did retained profits fail to account for the major part of net financing. The manner in which these totals were divided among the different groups of companies is shown in Table X.

With the exception of United States Steel, all groups show large increases during this period. Bond increases represented important additions for all groups other than United States Steel. Changes in preferred stock were relatively uniform for all groups with the exception of Group V. Changes in common stock, on the other hand, show wide variations but additions of common stock for all groups were important. However, approximately one-half of the gain in common stock came about through stock dividends and exchanges and was divided fairly evenly among the groups. Reserves represented small additions while surplus was relatively of greatest importance to companies in Group IV.

CONCLUSION

Numerous points have been advanced in support of the claim that stock exchanges aid in the financing of industry. Thus it is argued that the existence of an active market is of interest to prospective buyers of securities; that the quotation of prices is of advertising value to those companies whose issues are traded; that the ease and rapidity with which transactions can be effected on exchanges leads buyers to prefer securities which are traded on exchanges. The important point is that the operations of organized exchanges are expected to facilitate the sale of new securities. However, almost all of the issues traded on stock exchanges are issues which have been previously distributed. In other words, the distribution of the securities is customarily effected through underwriting channels and sales branches before the issues are listed for trading. The securities may be shifted gradually from speculative hands to investment hands through the organized

markets but the fact still remains that the securities were originally disposed of to willing buyers. If the stock exchange is to aid in the financing of industry it must be through influencing buyers to subscribe to the new issues.

Securities are not ordinarily sold directly to buyers by means of the exchange machinery or listed immediately after sale for trading. The issuer may agree to apply for listing when the issue has been properly distributed and this may be an important factor in the sale of the security. Conceivably, prospective buyers might be interested only in securities for which there is an active market on an organized exchange and the promise of the issuer to seek listing might induce such persons to buy the new securities in the hope that an active market might develop. Under such circumstances the stock exchange would be helping in the financing of a company. However, the point should be made here that listing an issue does not insure an active market. Only a fraction of the issues listed on exchanges enjoy active markets.

One important point remains to be considered—the point that the securities exchange aids in the financing of industry only if industry is willing to accept such aid. If the supposed relationship between new investment and the preference of buyers for certain companies whose issues are listed is to hold, industry must follow financing policies which will take advantage of this relationship. The present study of the steel industry bears on this point.

The four media of financing studied for this industry are bonds, preferred stock, common stock, and surplus. The stock exchanges can exercise but little influence on the sale of bonds and none over the retention of profits. Any important aid to the financing of the steel industry must have been through facilitating the sale of common and preferred stock. During the first two periods studied, 1915–18 and 1919–23, bond sales far exceeded the sales of stock and the greater part of the new funds came from retained earnings. These two periods represent an unfair test of the financing argument because of the interruptions to normal financing caused by war operations. The last two periods, however, should represent very favorable circumstances under which to compare the different types of financing. For the period 1924–28 bond sales again exceeded stock sales and retained profits amounted to more than the total bond and stock sales. The final period 1929–36 was the only one of the four periods studied in which the sale of stock was relatively very important and even in this most favorable period bond sales were not greatly exceeded by the sales of stock. The experience of this period is different from that of the other periods in respect to retained earnings since surplus balances were reduced.

For the twenty-two year period bond sales were more important in total than stock sales and retained profits much more important than either. From the standpoint of net financing retained profits and sales of common stock accounted for most of the new invested funds.

For three of the four periods studied stock exchanges could have had only a minor place in the financing of the steel industry. During the fourth period the importance of common stock sales and the fact that most of the companies selling common stock maintained listings, lends support to the argument that exchanges aid, if only indirectly, in new financing. However, for the period as a whole the companies studied provided most of their own funds through the retention of earnings.

THE CONCEPT OF EXPENSE

Y. C. Chow

A cursory survey of accounting literature reveals that the word "expense" has been given many divergent meanings. Sometimes it is used as though synonymous with cost, that is, as a generic term which has no technical meaning without the addition of qualifying words.[1] More often it is used to refer to cost of services[2] (as against cost of tangible goods) or specifically to those service costs which are incidental to the selling, administrative, and financial aspects of business operation.[3] Another use of the term includes costs assignable to a particular quantity of revenue. In this last sense expense becomes a limiting factor by which gross revenue is reduced to net revenue. It is a determinant of the mount of profit or the element of equity increase.[4]

Perhaps in the minds of a majority of accountants the traditional and pragmatic idea of expense as service cost or cost of selling and general administration has been pretty well built up. But as an accounting concept many would agree that expense in the sense of over-all cost of revenue or profit determinant is much more significant than any other usage of the term noted above. It is the concern of this paper to examine the major controversies about the nature, scope, and technical significance of the term as so understood, its relation to other accounting concepts such as costs, losses, revenue charges, surplus charges, etc., and to inquire whether expense, as revenue-cost, is the broadest and the most significant grouping of items affecting profit or income.

GOODS EXPENSE VS. SERVICE EXPENSE

The question of the nature and scope of expense in the sense of profit determinant has long been a matter of controversy. The first aspect of the controversy may be stated as follows; Does expense, as revenue-cost, consist only of cost of goods sold or of other costs connected with business operation as well? The question may seem academic, but accounting literature has so persistently emphasized the distinction between goods cost and service cost, and so characterized them in abstract terms, that the true nature of these two classes of costs has been widely misunderstood. Hatfield, for instance, states that an "expense" (meaning service cost) being an outlay of goods without the receipt of some other equivalent goods, is essentially a "loss transaction."[5] While "cost of goods sold," representing assets given up for other assets, expectedly of greater value, is an exchange transaction. And Kester, agreeing with Hatfield, believes that cost of goods sold represents an asset exchanged for profit while other operating expenses are merely deductions from that profit.[6] In other words, according to these writers, cost of goods sold and other operating expenses are entirely different categories: one represents asset

[1] See Greer, *How to Understand Accounting*, p. 75, and Rorem, *Accounting Methods*, p. 502. These two authors express the idea that expense and cost are identical terms. Saliers, in his edition of *Accountants Handbook*, uses the term "expense of production" as synonymous to "cost of production." So do many economists.

[2] Thus accountants often speak of organization expense, selling, general and administrative expenses, but of cost of goods sold.

[3] So used it is usually interpreted as the necessary deduction from "gross profit" to arrive at net profit.

[4] This usage is adhered to by Paton, Littleton, Greer, Porter, and most other entity theorists.

[5] Hatfield, *Accounting*, p. 61, also, *Modern Accounting*, pp. 27–8.

[6] Kester, *Accounting Theory & Practice*, Vol. I, pp. 94–5.

decrease, the other proprietorship decrease; one represents profit determinant, the other profit deduction. To combine them into one category, says Kester, would result in "an undesirable confusion of asset and expense values."[7]

Other writers, also of the proprietorship school but somewhat opposed to the theory of Hatfield and Kester, see no essential difference between cost of goods sold and other service costs connected with business operation. In fact, only by adding these two classes of costs together do they find the over-all revenue-cost figure or the profit determining factor. In the words of Rorem: "The expiration of merchandise is a business operation in the same sense as the payment of cash or the incurrence of a liability on account of other operating expenses, although cost of goods sold is usually not listed with the other expenses on grounds of administrative control."[8] And according to Kohler: "Expense is but asset used up or dissipated; the transfer from asset to expense may be instantaneous as in the case of merchandise sold or it may be continuous as in the case of such items as insurance, rent, interest paid in advance, etc."[9]

THE INCIDENCE OF EXPENSE

Another controversy over goods cost and service cost arises in connection with the time of emergence of expense. Kohler explicitly states that the transfer from asset to expense may be instantaneous, as in the case of merchandise, or it may be continuous as in the case of such items as insurance, rent, interest paid in advance, etc. This means that goods costs do not become expense until goods are sold while service costs become expense as they are utilized or "used up."[9] This means that all general overhead and distribution costs, all utilized labor and implement services which are not inventoriable or assignable to production costs are expired assets and therefore deductible expenses. And this, perhaps, represents the orthodox attitude on the incidence of expense. But another holds that all cost elements, whether manufacturing, selling, or administrative, behave in general in a similar way; none of them becomes expense when they are utilized or when they make a contribution; assets do not expire at the stage of utilization or conversion; they expire and become expense only when they pass out of the business, or when it is necessary or appropriate to match them against the resulting revenue.[10]

"INTEREST EXPENSE"

The third aspect of the controversy is concerned with whether expense as revenue-cost should include the so-called "financial expenses." One school maintains that, expense includes all deductions from gross revenue necessary to arrive at the proprietary net profit. "Financial expenses," therefore, are profit determining factors as much as other expenses. Thus, interest and discount items are variously called administrative expense (by Bell), non-operating expense (by Kohler), and financial expense (by Kohler and Rorem). The other school holds that interest charges are not expense or profit determinant but profit deductions. The arguments against the inclusion of interest charges and other incongruous items in expense may be seen in the following pattern of the expense concept as expressed by Paton:

a. Expense means asset value expired in connection with the product sold. It consists only in the expirations of valuable goods and services purchased by the business with the amalgamated funds of the long-term investors as a group. Anything that is not purchased by

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[7] Kester, *Advanced Accounting*, p. 496.
[8] Rorem, *Accounting Methods*, p. 55.
[9] Kohler & Morrison, *Principles of Accounting*, p. 13.

[10] This position is held by Paton and most of the other entity theorists of accounting. See Paton, *Accounting Theory*, pp. 160–63.

the business, or that which does not constitute asset value at the outset, cannot later become expense. Interest is therefore ruled out.

b. Expense is strictly an operating or managerial figure. It measures the management's efforts to secure revenue. Any asset decrease that does not represent the voluntary effort or commitment on the part of management or that which cannot be associated with revenue as contributing efforts does not constitute expense. Taxes and losses are thereby ruled out.
c. Expense, being first an acquisition and, later, an expiration of definite asset value, is to be differentiated from mere deductions or adjustments. Sales returns and discounts are deductions from revenue to reveal the true revenue figure rather than expense. So is normal bad debt.
d. Technically the expense charge is an offset against that part of revenue credit which represents the asset decrease or non-equity element. It is the indeterminate amount of the cost of revenue at the time of recording the mixed sales account.
e. Expense, being a charge against the asset credit or non-equity element of the gross revenue figure is to be sharply distinguished from a charge against net revenue or equity element; while a charge against net revenue may not be so sharply distinguished from a charge against surplus or accumulated net revenue, as both represent equity element.
f. As there is no ranking in assets, so there is no ranking in costs or expense. No part of expense, that is to say, can be considered as prior to any other part in the order of recovery, and every dollar of revenue must be applied equally and proportionately to every dollar of expense incurred in securing that revenue. The only cost that can be considered as residual is that of the services of the enterprise or capital which in accounting is not booked as cost or expense but only to be revealed as a balance or excess of revenue over expense.[11]

It should be noted that the definition of interest as profit distribution does not preclude the calculation of net profit or loss accruing to stockholders and the presentation of such net figure with any degree of emphasis desired; while the other concept, interest as profit determinant or expense, also permits any interest item to be ignored when comparative earning figures are wanted. So in practice the whole controversy of "interest expense" seems to be resolved into a compromise. But in theory the issue seems always alive.

"LOSS EXPENSE"

The concept of expense as an operating or managerial figure, measuring the costs expired in securing revenue, as developed by one school of accounting has been carefully distinguished from unexpired costs or assets on the one hand and losses on the other. Granting that these are essential accounting distinctions several questions arise as to whether all losses and ineffective costs should be segregated and separately accounted for as profit deductions rather than profit determining items, whether standard cost is the only "true" cost (as has often been asserted), while variances from standard are species of gains and losses, and whether there is any such thing as "risk cost" or "loss expense."

It is apparent that from the standpoint of an ideal standard of efficiency considerable sums that do not bring any return or anything like adequate return are spent by most enterprises. Indeed, waste or inefficiency is a condition to be found everywhere. But in determining cost and expense an unduly narrow and ideal view of operation seems unwarranted. The assignability of apparent wastes and idle capacity losses into production costs may be a material issue, but cost figures that are far removed from the actual conditions of operation of the particular business have little use. Very few persons would contend that cost at an ideal standard yields the proper determinant of profit

[11] Note that this is an interesting contrast to Kester's idea that the proceeds of sales is first applied to a recovery of cost of goods sold, and "expense" is always next recovered from the margin of "gross profit." See Kester, *Advanced Accounting*, p. 496.

or that variance from such standard does not figure in the cost of revenue.

Dismissing the question of loss from the standpoint of an ideal situation or unattainable standard we still face the fact that many losses, apparent or real, are normally occurring in every business enterprise. Bad debt is a universal business phenomenon; partial idleness of plant capacity is a constantly recurring fact; goods may become unsalable through handling and the lapse of time; loss on security investment is a common experience of companies with surplus working capital; taxes of various sorts which represent no voluntary purchase of cost factors are a kind of semi-loss as certain as death. Thus the reality of the typical business situation seems sufficiently clear; technical production is inextricably bound up with various aspects of business risks and speculations. But what is the logic of the situation? Is the conclusion inescapable that expense, as revenue-cost, consists essentially of two elements: effective costs and losses?

Under the traditional rule of "revenue and capital," all charges, except conspicuous non-operating items and extraordinary losses, are deductible from revenue in determining the profit figure. And under the proprietorship theory of expense, normal losses are not only deductible in arriving at net income but they are considered homogeneous with expense as a group of income determining items, all falling under the head of "temporary proprietorship decrease." But to those who conceive of expense as a strictly operating or managerial figure, measuring, as precisely as it should, the expired costs of purchased goods and services that go into the generation of revenue, there are apparent difficulties in conceiving the idea of loss-expense or in harmonizing expense and loss. It may be recalled from the outline of Paton's concept of expense that interest charges, taxes, bad debts, sales discounts and the so-called normal loss items are completely ruled out from the expense category either because they represent no purchased goods and services at the outset, no voluntary effort or commitment on the part of management, no acquisition and expiration of definite cost factors, or because their expiration has no necessary connection with the production of revenue. In his criticism against the liberal use of non-operating classification and direct surplus charges for manipulative purposes, however, Paton emphatically asserts that operating expense should include the full quota of asset expirations logically connected with the business operation broadly conceived. Accordingly, items such as cost of maintaining legitimate idle capacity, loss on investments of working capital, loss on goods damaged through ordinary business operation and other legally or socially necessary expenditures are all charges to operation. The soundness of this broad conception of business operation and operating charges must be granted. But strict application of Paton's original definition of expense as utilized and expired costs of purchased goods and services in the production of revenue, would, perhaps, exclude some of these loss items. Paton appears to be leaning toward the attitude that any loss of definite asset value that could reasonably be interpreted as necessary and purposive sacrifice in the course of business operation broadly conceived should be included in the category of operating expense. But he is far from conceding that the distinction between expense and loss needs to be abandoned in constructing a broad, working concept of expense or revenue-cost.

There are, of course, other opinions on the subject of "loss expense" but it may fairly be stated that there are two major schools: one which stresses the sacrifice or proprietorship decrease idea of expense (all normal losses that may be deducted

from revenue without distorting the earning picture are expense in its proper sense); while the other stresses the managerial effort or contributing cost-factor idea of expense (only those normal losses which have definite expense aspects, those which can be interpreted as a sort of purposive sacrifice of costs in business operation, may be brought under the category of expense).

THE OLD CONTROVERSY VIEWED IN PERSPECTIVE

It seems safe to say, regarding the first aspect of the old controversy, that the narrow conception of expense or profit determinant as limited to cost of goods sold to the exclusion of all other service costs connected with business operation is untenable. True it is the goods, and goods alone, that is priced, exchanged, and charged with the duty of recovering the cost and earning a profit margin. We cannot very well say that selling, general, and administrative expenses all represent services that are actually sold. Indeed, the premise may be granted that GOODS SOLD alone earns the entire amount of the sales revenue, but it does not follow that it is COST OF GOODS SOLD which alone figures in the cost of revenue. The goods as made and sold is one thing; the cost, as assigned by the accountant, is quite another. To identify goods sold with the cost of goods sold is then the fallacy into which one school of accounting thought has fallen. Suffice it to say that in determining cost of revenue all costs which help the final fruition of revenue must be considered. Selling, general, and administrative expenses are therefore expense in exactly the same sense as cost of goods sold. They belong to the same category not because they all result in proprietorship decreases, but because they are integral parts of the asset expiration in connection with securing revenue. Kester is correct in characterizing the revenue credit as a mixed category of asset decrease and equity increase (assuming business is successful) but the element of asset decrease is measured by the full extent of the assignable expense or cost of revenue, not simply by cost of goods sold. The expense charge represents only an offset against the entire revenue cost or non-equity element of gross revenue, thereby breaking the mixed category and disclosing the element of equity increase or profit.

The second aspect of the controversy over the expense concept—the incidence or emergence of expense—seems to have escaped the attention of many accountants. Service costs, except those assignable to production costs, are commonly considered not inventoriable. Hence, the question "When do selling and general administrative COST become selling and general administrative EXPENSE?" seems purely academic. But in many cases where more refined and rational matching of revenue and expense is desirable (as in making monthly or other short-term income statements), it makes considerable difference whether utilization, expiration, or some other criterion is chosen to indicate the emergence of expense.[12] On the whole, the theory that all costs pass through three distinct stages in the course of business operation (acquisition or incurrence, utilization or conversion, and final expiration or disappearance from the business) is sound and useful, however theoretical or improvable it may seem. It is a valuable aid in the task of matching revenue and expense and in working out a scheme of deferring service costs. Care must be taken, however, not to stretch the meaning so that expired costs which have

[12] Current practice is unsatisfactory in the treatment of buying, selling costs, in the amortization of organization, development, and rehabilitation costs and also in the accounting for expenses of instalment sales. Much improvement is possible through a change in the general concept of the incidence of expense.

not strictly been utilized or converted from an unduly technical or departmental point of view do not enter into the expense stage or category.

The controversy over "financial expense" raises the whole general question of the proper point of view of accounting and is really too big to evaluate here. Two principal points of view have been considered: the point of view of the proprietor or stockholder, and the point of view of management. From the point of view of the proprietor or stockholder explicit interest may logically be viewed as a cost of capital service bought from "outsiders" just as any other cost factor. The inclusion of explicit interest alone in any reckoning of manufacturing or distribution cost, however, would be misleading because the cost figure tends to fluctuate with the type of capital structure. Many accountants, therefore, take the attitude that interest is not a production cost but a revenue-cost or expense. But the resulting profit figure, when interest is treated as expense, would also fluctuate with the method of financing. This seems to suggest that interest should best be treated not as production cost, nor as revenue-cost, but as a distribution of income.

From a managerial point of view the return on all capital investment other than differential profits might, for certain purposes, be included in cost and expense. But such accounting involves complexities of procedure and interpretation that are discouraging. Its essential objective—effective managerial accounting—can be attained by simpler methods,[13] and accountants in general have been slow to endorse such a scheme which shows all "true economic costs" as costs and only excess profits as income. In other words, the same conclusion is reached: all interest charges, explicit as well as implicit, are excluded from cost and expense and treated as income distribution.

What about "loss expense"—the last aspect of the old controversy? It seems that the proprietorship decrease idea does not afford the best theory for bringing both expense and loss into the category of revenue-cost. On the other hand, any attempt to sharply divide expense and loss and to pigeonhole all items into these two classes would also be futile. It is indeed misleading always to think of expense as non-loss and of loss as non-expense. The connection between many expense items and revenue is indirect, not clear, and often remote. The ultimate effect of a particular expense item may not be ascertainable, nor its value or product measurable by its cost or any other criteria. Some selling efforts, for instance, may repay their cost many times over; others may prove entirely fruitless. Fruitless costs are losses, in a sense, but it is hard to think of the loss as a separate deduction from a profit earned by entirely unrelated factors. Thus obsolescence, idle capacity losses, loss on damaged goods, loss from short-term investments, contributions, etc., are all losses; but because they are parts of the regular scheme of business operation they may all have expense aspects. In order to distinguish between expense (or profit determinant) and loss (or profit deduction), the proper approach is not to trace the ultimate effect of any particular item of cost or asset decrease, but, as already suggested by Paton, to differentiate the operating and the non-operating items, with the former broadly conceived as involving economic as well as technological aspects. The chances are that among the operating items will be found effective costs, necessary sacrifices, preventable wastes, sheer losses all present and shading into one another. With every item scrutinized in the light of its origin, nature, its relation to business operation and manage-

[13] See Paton, *Accountants Handbook*, pp. 1114–5.

ment policy, a broad concept of expense can be established excluding only nominal items and adjustments but including all asset expirations economically associated with current business operation. In it, sheer losses, segregated as cost of inefficiency, would be included, for these losses represent simply a part of the same family of actual costs separable in accounts, but inseparable in incurrence and expiration, from the rest of the operating charges and are profit determining in character.

This concept of expense may legitimately be extended not only from goods costs to service costs, but also from positively contributing or revenue producing factors to normal loss items, if these losses can be interpreted as purposive sacrifices or losses having expense aspects, and to sheer losses, which represent uneconomic costs connected with business operation.

REVENUE CHARGE VS. SURPLUS CHARGE

In the discussion of the old controversy over the expense concept, attention has been focused upon those items which are income determining in the sense of charges against gross revenue to reveal the element of equity increase. Non-operating losses and past items crystallized during the current period are not considered as salient factors in determining income in that sense. But the fact remains that all the non-operating items affect the operating result, while new discoveries of past expenses and losses reflect the inaccuracy of past recorded income. The income story is not completely and truthfully told, therefore, without a consideration of these non-operating and past expenses and losses. Hence, the question: what is the nature of these items, and what place should they take in the earning picture of a business? If non-operating losses and past items are considered as affecting income in a larger sense, does it follow that they all belong to so-called revenue charges or must some of them be treated as surplus charges? Or, can our concept of expense be logically extended to cover all expenses and losses, properly recognized during a period, whether operating or non-operating, current or past? Here again, accounting opinion is divided.

Several strong arguments can be offered against the abolition of surplus charges or the treatment of all expenses and losses indiscriminately as current revenue charges. Non-operating losses and past items are, by definition, not current revenue-cost. Being non-revenue cost, they may not be grouped with revenue-cost under one single category or account-group that can be homogeneous in itself. The broadest and most significant grouping of income determining asset expirations must therefore be limited to congruous items of revenue-cost. The charging of any major item of expense or loss not applicable to the period under review is also objectionable because the revenue balance after deducting such items would be meaningless and would result in a distortion of the periodic income figure.[14] Hence for such extraordinary items direct charge to surplus is desirable as well as necessary. And pushing these possibly significant items into obscurity through the surplus channel can be avoided by the use of the surplus analysis statement prepared periodically along with the income statement.

The American Accounting Association holds the unique position that all expenses and losses that may appear in any particular period possess common accounting characteristics which require that they be treated as revenue charges even though not all of them are strictly revenue-cost. The argument is based somewhat on the following pattern:

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[14] See DR. Scott's criticism of the "Tentative Statement of Accounting Principles," ACCOUNTING REVIEW, Sept., 1937.

a. All expenses and losses, whether operating or non-operating, current or past, have the common accounting characteristic that they all express asset diminutions related to income, and as such they should be sharply differentiated, by reporting exclusively through the income sheets, from other asset diminutions which are related to capital and which should be reported only through the balance sheet.
b. Every item on the equity side of the balance sheet, including earned surplus, is a species of capital or equity; only capital charges or asset diminutions directly affecting capital (as distributions of income and withdrawal of investment) may be charged directly to equity or capital accounts.
c. The entrenchment of losses upon capital is a sequence. That is, losses fall first upon the common stock equity, then upon preferred stock equity, and lastly upon the bond equity and the preferential creditors. The sequence may be pushed down from capital stock to capital surplus, earned surplus and on to the equity element in the current revenue. Unless current income is exhausted, therefore, there is no loss of accumulated income or surplus or any other equity.
d. Unless income charges are reported exclusively through the income sheets, unless direct charges of income items against equity accounts are barred, and unless the sequence of absorbing losses is followed, the result is inevitably a distortion of the fundamental accounting distinction between income and capital.[15]

It may be noted that the arguments as set forth by the opposing schools, though both valid to a certain extent, do not settle the issue of revenue-charge vs. surplus-charge. One school is certainly correct in maintaining that there is no theory or principle which justifies the combination of all sorts of expenses and losses under one single category of revenue-cost, or revenue-charge, or any other account group, and that there is no income concept of sufficient significance which requires the deduction of all expenses and losses appearing in a period from the revenue or income of that period. But it is difficult to agree with the conclusion that the only logical way of treating the extraordinary and past items is to charge them directly to surplus. For if there is anything to be gained through charging all expenses and losses into current revenue (such as the showing of total net income through successive income sheets), and if the stratification of the income sheet is allowed to preserve any prior income balance that is considered significant, no theory or principle would dictate that non-operating losses and past items must still be charged directly against surplus. The other school, however, seems on firm ground in saying that surplus adjustments are not only unnecessary but undesirable; they bury possibly significant items in the balance sheet accounts and render the income sheet somewhat incomplete and untruthful. But there is nothing fundamentally wrong with charging some non-operating and past items (which represent equity-decreases) against the surplus account (which represents accumulated equity-increase); it is, however, poor income accounting of the direct type.[16] And the conclusion should not be drawn that the only alternative to charging against surplus is charging against revenue. For if the income balance after deducting all expenses and losses from revenue is of doubtful significance and if there is any other arrangement which leads to more correct periodic income figures and also permits the showing of total net income or loss over the years, the theoretical justification for charging all expenses and losses against current reve-

[15] See Littleton, "High Standards of Accounting," *Journal of Accountancy*, Aug., 1938, also, Littleton, "Suggestions for Revisions of the Tentative Statement of Accounting Principles," Accounting Review, Mar., 1939.

[16] All income transactions, when reducible into its accounting elements, may conceivably be recorded in the balance sheet accounts. This is called, by Paton, the direct method of income accounting. If the income items have significance in themselves and should not be buried in the balance sheet accounts, supplementary accounts for those items should be set up. This is called the indirect method of income accounting which is much better accounting than the direct method.

nue would be slight. The Association admits that in the case of gross mistakes in the estimates of expenses and losses during past periods, recasting of income sheets is a better procedure than charging all corrections against current revenue.

TOWARD A BROADER CONCEPT OF EXPENSE

If neither revenue-charge nor surplus-charge is the theoretically proper way of handling non-operating losses and past items, what then is the best policy? Is there any other way (short of periodic recasting of income sheets) of disposing of these items, or is the choice limited to the two alternatives of charging to revenue and charging to surplus? The problem of correctly treating the "surplus adjustment" items is more than one of procedure along. Some theoretically as well as practically sound solution must be evolved. A careful revamping or reinterpretation of the Association's arguments in the spirit of its proposal will lead to an entirely satisfactory solution.

First, it is necessary to recognize the realities of accounting expenses and losses that may appear in a particular period. They consist of very different classes: operating and non-operating, current and past, allocable to particular periods and unallocable to any period. Thus in terms of accounting elements these are (1) revenue-cost or offset against the non-equity element of current revenue, (2) current non-operating charges and losses or offsets against the equity element of current revenue, (3) past expenses or offsets against the non-equity element, or the overstated part, of the past recorded equity increase, (4) past non-operating charges and losses or offsets against the equity element of the past recorded equity increase, and (5) expenses and losses which defy logical allocation to particular periods or offsets against both the non-equity and equity elements of both current revenue and past recorded equity increase. The dilemma faced by the accountants is that expenses and losses may not be charged directly to surplus or equity account without concealing or distorting some income figure; yet the mere alternative of revenue-charge is inadequate to comprehend all the heterogeneous items of expenses and losses that may appear during a period. Only a broadened concept of income and expense will bring the very different classes of expenses and losses into one single picture and piece the seemingly disconnected items into a meaningful whole.

It is significant to observe, therefore, that all the expenses and losses which may appear during a particular period, although composed of very different classes, are all related in a way. It is useless to theorize that revenue-cost and non-operating losses are fundamentally different categories, one representing asset-decrease, the other representing equity-decrease, and thereby implying that non-operating losses or equity decrease items involve no asset decrease. It is manifest that any and every item of expense or loss involves an asset diminution, but none of them, as debit or charge account, represent any asset decrease. And coupled with this idea of asset-diminution-back-of-every-expense-or-loss, if income is broadly conceived as including both current earning and accumulated capital, then the Association's two dimensional classification of asset diminutions into those affecting income and others affecting capital will hold true. All expenses and losses may then be brought under the concept of "asset diminution affecting income" (or income charge, or expense). Being thus related under one single but larger concept, the question of how to disclose the various interrelated items of expenses and losses is resolved. The problem is not to charge or to offset one against the other but to

relate and match them in such a way as to best represent the concept of a complete income picture. Items which go to make up the operating picutre will be grouped in one section with the operating net as its balance. All gains, losses, income additions and deductions which are logically allocable to the period under review will be in the next section with the periodic net as its balancing figure. All the adjustments of past estimates and items which defy clear-cut allocation into any period may be thrown into the third section, with its balance showing the effect of all expenses ank losses crystallized during the period upon the accumulated income or capital. In fact, it can be argued that those distributions of income which have been called capital charges, and which may appropriately be recorded directly in the balance sheet or capital accounts, should also be set up as separate accounts and brought into the picture if that is data for analysis and interpretation. And even the accumulated equity increase figure in the balance sheet might be taken out of its setting temporarily and put into the ensemble of income items. A fourth section exhibiting, as it does, income distribution and appropriation constitutes the connecting link between the income sheet and the balance sheet. These, however, are entirely matters of intelligibility of reporting; the essential point being the complete and logical matching of all expenses and losses appearing in a period with the related current revenue and affected past recorded income.

The above analysis of the new controversy over the expense concept makes it clear that accountants would do well to think concretely in terms of flowing commodities and services as well as abstractly in terms of technical categories. Technically, the expense or revenue-charge account-group may not be extended beyond revenue-cost to include all expenses and losses that may crystallize during a period; but the concept of expense, as distinct from expense account, may legitimately be extended to include all asset diminutions related to income in the broad sense—the idea is extremely useful in the area of income accounting and reporting. It relates the whole flock of data which are parts of a complete picture of income but which have more or less been arbitrarily segregated and labeled. The accounting literature is filled with such terms as "fictitious," "nominal," "proprietorship decrease," "temporary proprietorship decrease," "asset decrease," "equity decrease," "revenue charge," "income charge," "surplus charge," "capital charge," "income loss," "capital loss," "capital decrease," etc. No doubt this mass of technical, abstract terms must have challenged the scientific spirit of many thoughtful accountants. This broadened concept of expense is offered as a possible way of adjusting our thinking to the confusing ideas and theories.

If the premise of segregating asset diminution items into income and capital charges with the former broadly interpreted as all asset diminutions related to income in the aggregate, and the indirect method of income accounting be accepted, there would be no distortion of income and capital of the kind which the Association meant to discourage.

A NOTE ON PRINCIPLES OF ACCOUNTING

Edward G. Nelson

The authors of "A Tentative Statement of Accounting Principles" have accomplished something for which the accounting profession, teachers and practitioners alike, should be grateful. They have described carefully and concisely what accountants do and their "statement" indicates the nature of current "good accounting practice." They have not attempted to prepare a text for those who have no knowledge of fundamentals, for such texts exist in ample number.

As was to be expected, the results of this effort did not meet with universal approval.[1] Accounting, as Littleton declares, is ". . . relative and progressive. The phenomena which form its subject matter are constantly changing. Older methods become less effective under altered conditions: earlier ideas become irrelevant in the face of new problems."[2] Professional accord seldom occurs in such fields of knowledge.

Fortunately much of the recorded disharmony is more apparent than real: Disagreements frequently arise when conclusions are stated without reference to premises. The evolution of accounting practice sometimes, in fact usually, proceeds more rapidly than the statement of postulates. It is therefore intended, in this paper, to indicate how some of the grounds for discord will disappear when the premises of an accounting and a theory of business enterprise are made explicit, and to suggest that some of the work by the committee for revision should be concerned with a statement of premises and a theory.

To demonstrate how misunderstandings can be avoided, it may be well to examine, in the light of a given classificatory system, some question over which there is disagreement. Are partners' salaries an expense? If a given set of premises is selected, the answer is merely a matter of ratiocination.

Suppose, for example, that the conditions suggested by Canning are chosen.[3] Net enterprise profit is accurately measured when *all* of the following conditions are satisfied:

I. During the entire time interval during which the enterprise exists there shall be a one-to-one correspondence between:
   1 (a) Money receipts from enterprise operations and (b) gross revenue; and
   2 (a) Money payments necessary or incident to those operations and (b) gross expenses; and

II. The sum of the annual net enterprise profits, during the whole interval of enterprise existence, shall be equal to the difference between the total enterprise money receipts and total enterprise money disbursements.

III. During any unit time interval (say, one year) the gross revenue shall be equal to all enterprise money receipts attributable to operations brought to some specific stage (e.g., sales) during the unit time interval.

IV. During any unit time interval the gross

[1] See, for example, Carman G. Blough, "The Need for Accounting Principles," Accounting Review, xii, 30; C. Rufus Rorem, "Accounting Theory: A Critique of the Tentative Statement of Accounting Principles," *ibid.*, 133; George R. Husband, "Accounting Postulates: An Analysis of the Tentative Statement of Accounting Principles," *ibid.*, 386; F. P. Byerly, "Formulation of Accounting Principles or Conventions," *Journal of Accountancy*, lxiv, 93; W. A. Paton, W. P. Fiske, James L. Dohr, and Andrew Barr, "Comments on a Statement of Accounting Principles," *ibid.*, lxv, 196, 308, 316, 318.

[2] A. C. Littleton, *Accounting Evolution to 1900*, 361.

[3] J. B. Canning, "A Certain Erratic Tendency in Accountants' Income Procedure," *Econometrica*, i, 53–4.

> expense shall be equal to all outlays made or to be made to obtain the gross revenue (see III above) of that unit time interval.

These conditions are said to include all money transfers except: (1) contributions made to the enterprise funds by those beneficially interested in the enterprise proprietorship and (2) distributions of enterprise funds among those beneficially interested in the enterprise proprietorship. The former are designated as investments in the business and the latter as withdrawals.

There is, in the given system, an accounting for enterprise receipts and disbursements to and from two categorical interests: those who do and those who do not hold an interest in the enterprise proprietorship. The receiving of money from the former is classified as an investment and from the latter as an element of revenue. A disbursement of money to the former is a withdrawal and to the latter an element of expense.

Partners' salaries, when referred to the given classificatory system, are not an expense. If they were so classified, neither the first nor the second condition would be fulfilled. The sum of the expense series for the time interval of enterprise existence would exceed the money payments necessary to enterprise operations by the amount of the partners' salaries, and the sum of the annual net enterprise profits would be less than the difference between the receipts and disbursements by an equal amount. The test of an expense—the ultimate disbursement of money to those who do not hold a beneficial interest in the enterprise proprietorship—is not satisfied.

Given the premises, a number of other questions concerning the accounting for a partnership may be answered. Interest on partners' capital and loans is excluded from the category of revenue and expense. Since there are but two categorical interests, the balance sheet can exhibit but two distributive sums: the sum of the liabilities and the net proprietorship. Partners' loans to and from the firm are an adjustment to their capital interest. They are not assets or liabilities.

If faulty logic is excluded, any disagreement about the nature of partners' salaries will arise from reference to contrary premises. For example, when it is said that it is logical to treat them as an operating expense, it is implied that the amount of gross expense for the entire time interval of enterprise existence shall be equal to:

1. The amount of money disbursements necessary or incident to enterprise operations during that time interval; *plus*
2. The sum of the credits for partners' salaries during the same period.

Under such a system, a one-to-one correspondence between money payments necessary to enterprise operations and gross expense would be an accident. There is no necessary relation between the two quantities.

The two propositions are more than alternative methods. They are of a different order. Each uses the word "expense" with a different meaning, and, by the propositions selected as a point of origin, each gives a different significance to "net enterprise profit."[4] Each of these methods may be logically extracted from categorical postulates, but they are mutually exclusive methods of accounting.

While the profession, possibly through a committee, should indicate the premises from which it operates, a statement of

[4] Writers sometimes declare that, although there may be some question concerning the quantitative relation between partners' salaries and the wages of management, it is preferable to treat the former as an expense because the meaning of net enterprise profit is then similar to the economic view. See, for example, A. W. Johnson, *Principles of Accounting*, n. 11, 274–5 It is interesting to observe that such writers frequently use the terms "expense" and "net enterprise profit" with a different meaning when they are accounting for a single proprietorship. In the latter case, they seldom attempt to determine the wages of management, and proprietary withdrawals are generally treated as a reduction of capital.

those premises is not, itself, sufficient. There should be some attempt to avoid compounding mutually exclusive ends in order to avoid much of the current confusion. For example, propositions designed to account for partners' gains or losses in relation to the gains reasonably to be expected from alternative employments should treat wages of management and interest on partners' investments as expenses.[5] On the other hand, propositions designed to measure the absolute earnings from a proprietary investment will exclude these two elements from that category. Assume that the reveune for any given period is $7,000 and that the opportunity costs are $3,000 for partners' salaries and $200 for interest on their investment. The *partners* will lose $1,200 if $5,000 is disbursed or promised in order to acquire the revenue for the period. Despite this loss by the partners, *enterprise operations* return $2,000 in excess of funds invested. In the one case, we are accounting for the partners' gains or losses in relation to a given standard: in the other, we are accounting for the absolute return in excess of the funds invested.

While a statement of premises is necessary if accounting is to be consistent, it alone will not settle differences of opinion. Accountants could build a perfect deductive system where every proposition logically followed from fundamental postulates but which might have no relation to actual business situations. Ultimately the premises must spring from some theory of business enterprise, for the accounting methods themselves are not subject to physical proof.[6] A given method is "properly" applied if, within the limits set by the given premises, it distributes revenue and expense in a manner that may be reconciled with an adequate theory of business enterprise. A theory is adequate when it conforms with our conception of enterprise and is self-consistent.

Canning is the only writer who seems to have an adequate theory of enterprise for use in accounting.[7] He conceives that a firm acquires factors—men and equipment—in order to exploit their services in productive opportunities. The enterprise *is* the conversion of services (factors) into a product for sale.[8] The revenue, for the time interval of enterprise existence, *is* the conversion of the product (services) into the receiving of money or money's worth.[9] The expense, for the same period, *is* the disbursing of money incident to acquiring the revenue.

The cost of the product is said to be the cost of the component services. The expense, for any unit time interval, is therefore the cost of the services from which the revenue for the period is earned. Since services are frequently purchased in stocks sufficient to contribute to the revenue of many intervals, the amount of expense for any single period is the product of the number of services rendered in acquiring the revenue and the average cost per unit of service in the stock.

For example, a motor truck is said to be purchased in order to acquire transportation. However, the purchase of a truck is not itself the purchase of transportation. Gasoline, oil, tires, repairs, and a driver must be acquired before a mile or a number of miles may be run. The *total cost* of the

[5] It cannot be assumed that all writers, in treating partners' salaries as an expense, have this end in mind. Johnson, for example, denies that interest on partners' capital is an expense. See *ibid.*, 285–6. In determining net enterprise profit, he compounds a relative and an absolute amount.

[6] *Cf.*, Solomon Fabricant, *Capital Consumption and Adjustment*, 194. However, the theory of business enterprise does not determine whether we are accounting for an absolute or relative profit or loss and, accordingly, it does not set the limits for the amount of revenue or expense for any given period. These matters must be set forth in the original propositions about the nature of accounting.

[7] J. B. Canning, *The Economics of Accountancy*, New York, 1929.

[8] *Ibid.*, 233–6.

[9] *Ibid.*, 94–9.

asset is said to be the amount of the outlays necessary to procure the services in any amount. It includes the purchase price (less salvage) of the agent and the operating and repair costs. The *average cost* per unit of service is usually said to be the arithmetic mean of the total cost and the number of services in the stock.

This theory is not proposed merely as a generalization: by reference to it, Canning is able to judge the worth of expense-spreading formulae when they are applied to a particular case. He finds, for example, that the straight-line method is adequate when the quotient of operating outlays divided by the services for each period is a constant.[10] Since, by the given method, the annual amount of depreciation is a constant, any increment in operating costs to satisfy the definition of expense, must be accompanied by a proportional increment in service.

Unlike many writers, Canning need not list the several formulae without comment concerning the conditions under which they may be used, nor is he forced to declare that "... there is no way of demonstrating the validity of the straight-line formula ... "[11] He need not accept a particular method because its application is simple, or because it is readily acceptable to the Bureau of Internal Revenue. His expense series have significance because they refer to an explicit conception of business enterprise.

Perhaps the need for a theory of enterprise and a statement of postulates may be further emphasized by reference to current balance-sheet practice. Littleton, for example, declares that "The central problem of accounting is to bring into association, in the present, the revenues identified with the present and their related costs, and to bring into association, in the future, the revenues identified with the future and their related costs ... The fundamental problem of accounting, therefore, is to cut through this stream of costs and correctly assign portions to the present and the future."[12] He does not deny that information in addition to unamortized cost is useful and yet, because it is not necessary to his system, it is excluded from the framework of double-entry bookkeeping.

Such a balance sheet is designed to link one fiscal period to another.[13] It contains only the balances necessary properly to distribute the receipts and disbursements as the revenue and expense of some unit time interval or as a capital investment or withdrawal. Any statement about the capital values of the several assets is, *ex professo*, excluded from the exhibit. Accounting for an absolute profit or loss is said to be a matter of leading and lagging receipts, and disbursements and the balance sheet serve as an instrument with which to carry the leads and lags from one fiscal period to another.

Although it is not intended, at this time, to expound a particular method, the nature of much current confusion can be demonstrated by contrasting these ideas with Canning's concept of the balance sheet. Littleton excludes information about capital values from the framework of double-entry bookkeeping. His balance sheet will exhibit, as a balance, past costs to be distributed to future periods. Canning, on the other hand, conceives of the balance sheet as a statement of financial position. It should exhibit, at any given time, a number of direct and indirect measures of expected future fund procurements and distributions.[14] His accounting will sometimes include, within the framework of double-entry bookkeeping, information to

[10] *Ibid.*, 265–73.
[11] W. A. Paton, *Essentials of Accounting*, 533.

[12] A. C. Littleton, "Suggestions for Revision of the Tentative Statement of Accounting Principles," Accounting Review, XIV, 60.
[13] See also, Eugen Schmalenbach, *Die Dynamische Bilanz*, 79–80.
[14] J. B. Canning, *op. cit.*, 181–2.

indicate the amount of expected future as well as past costs.

Accountants concerned with lagging disbursements will logically exhibit the end-period inventory at cost. This, according to their principles, is the "best" method of inventory valuation.[15] Canning's "best" method is a direct valuation.[16] His balance sheet, designed to indicate expected future receipts and disbursements, will exhibit cost *and* the difference between cost and a value to yield a given rate of return. The value to yield a given rate of return is said to be the value of the asset.

There are two "best" methods of inventory valuation, and more could be cited, because there are two sets of premises about the accounting for the balance sheet. Given the objective, there is no ground for a difference of opinion. Each is legitimate within its own domain. However, to avoid confusion and to make accounting intelligible the boundaries of each should be well marked with explicit premises.

The contrast is more sharply drawn when the "proper" accounting for goodwill is analyzed. When the balance sheet is an instrument for carrying leads and lags, only the amount paid for goodwill may be exhibited. To account for expense in subsequent periods, that amount must be amortized. When, on the other hand, the balance sheet is prepared in accord with Canning's premises concerning financial position, goodwill takes on a different significance. Its value is the difference between the estimated value of the enterprise and the sum of the asset values. The quantity may be positive or negative, and, subsequent to the purchase, it may increase or decrease. From this point of view, a condition frequently indicated by accountants—a zero valuation for goodwill—is rare indeed. Such an amount suggests an expected rate of return on the investment which is equal to some personal discount rate, and that the sum of the asset values is equal to the capital value of the enterprise.

The difference between the two methods is not merely a matter of including or excluding capital values from the framework of double-entry bookkeeping: it also concerns the manner in which expense is to be distributed. When, for example, an asset will not provide a service directly in money, Canning's "best" method, a direct valuation, must be abandoned. However, to stay within the limits set by his premises concerning the nature of the balance sheet, he must find some indirect measure of the asset's capital value. Since, with a given amount of expected revenue, an asset's capital value is decreased when the cost of acquiring that revenue is increased, the cost of replacing a given stock of services may be used as a standard of asset valuation. An indirectly valued asset, under Canning's premises, cannot, at any given time, exceed the cost of replacing the given stock of services by the next best alternative means.[17] When a proprietor can procure a given stock of services at a lesser cost per unit by some alternative means, the value of his asset is decreased. The balance to be distributed as the cost of future services is likewise reduced. The amount of expense, for any given period, is therefore the minimum cost at which the

[15] The statements concerning a particular method of valuation, unless the source is indicated, should not be attributed to any particular author, nor should they be confused with prevalent practice. Few writers list their postulates, and much is left to conjecture. Current balance-sheet practice is largely a hybrid of the two methods discussed in the text. Accordingly the present writer has found it necessary to delineate the two methods without strict regard to current practice.

[16] *Ibid.*, 214–27. Canning means, by direct valuation, a measure of future money receipts and disbursements. For an inventory he is concerned with the future receipts (selling prices) and future disbursements (selling and general expense) to be associated with a given stock of goods. A present valuation of this future series should be that amount which will yield the firm's normal return on the investment.

[17] *Ibid.*, 239–46.

services can be procured in a given amount.

Whereas Canning, by use of indirect valuation, proposes a method of expense distribution, other writers have generally neglected the effect of alternative opportunities upon their expense series. What, subsequent to acquisition, determines the maximum limit for the value of any asset? Is it implied that, at any given time, the balance of unamortized cost may exceed the cost of procuring a given stock of services in the most economical manner? Can the expense for any given period exceed the amount which, considering the available opportunities, a prudent investor would pay for the services rendered? These and many other questions cannot be answered until the premises of accounting are made explicit.

This note is not intended to establish a set of complete and authoritative principles, nor is it a profession of an adequate theory of business enterprise. The purpose has been merely to illustrate the equivocal nature of much that appears in the literature and to indicate a manner by which many current confusions may be dispelled. It is suggested that the Committee, as one of its primary functions, should state its premises, for they determine the nature of the propositions to follow. Furthermore, the Committee should indicate an adequate theory of business enterprise. Accountants need some standard by which to judge the worth of their formulae. Likewise, an additional question should be answered: Must accountants work from one, and only one, set of premises?

In such a program there is hope for the future. Accounting, unlike some other fields of knowledge, can avoid the charge that it has become an empty ritual.

THE SALE AS A TEST OF INCOME REALIZATION

Franklin H. Cook

The allocation of income with respect to periods of time is of fundamental importance in both accounting and taxation. Under the accrual basis of accounting the sale is looked upon as one of the best evidences of realized income. However, the determination for Federal income-tax purposes of the time when income is realized from a sale gives rise to such questions, as the following:

(a) Is income realized when a contract of sale is entered into by the parties?

(b) Is there income to the seller when legal title passes?

(c) Under what circumstances do such factors as the intention of the parties, possession, down payments, uniform sales act, *et cetera* affect the time of income realization?

In this paper the time of income realization will be examined with reference to dispositions of personal and real property. The study is based upon reported cases of the Federal Courts and the Board of Tax Appeals. Although the subject of deferred payment sales will be discussed generally,[1]

[1] A taxpayer may report on the installment basis under the following situations: (1) when he is a dealer in personal property which he has sold on personal credit by means of a conditional sale or similar transaction; (2) when there is a casual sale of personal property, exceeding $1000, and less than 30% is paid in the initial payments; (3) when there is a sale of realty and less than 30% is paid in the initial payments (sec. 44, Revenue Act of 1938).

a consideration of installment sales is excluded. Inasmuch as the legal principles applied to sales of personalty in determining passage of title differ from those applicable to transfers of title to realty, the two types of transactions sales will be considered separately.

Decisions of the Board of Tax Appeals and the Courts often turn on the basis of accounting which the taxpayer has followed. Throughout this paper the accrual method of accounting and reporting, because of its prevalence is the basis referred to unless otherwise noted.

TIME OF INCOME REALIZATION FROM SALES OF PERSONAL PROPERTY

The law divides all property into two groups: realty and personalty. Real property is land and everything permanently attached to the land, such as a building. All other property is designated as personal property, or chattels. The time when title or risk of loss passes from the seller to the buyer is determined by the law of sales and is incorporated in the Uniform Sales Act. Since this act has been generally adopted by the states of the United States, its principles will be followed in indicating when legal title passes to the buyer. The decisions of the Board of Tax Appeals examined in this part of the paper are classified under executory contracts of sale, intent of the parties in transferring legal title, including deferred payments, escrow transactions, specific goods, shipments on approval, C.I.F. and F.O.B. contracts, unascertained goods, fungible goods, and sale of goods by sample. In determining the time when income is realized the cases themselves reveal the weight given by the Board of Tax Appeals to the passage of legal title as the controlling factor.

Executory Contracts of Sale—A sale is an agreement which transfers the title, the property in the goods, for a consideration called the price. A sale has two elements in it: a contract, and a property interest. The agreement is part of the law of contracts, and an action of assumpsit can be brought for nondelivery. The passing of title represents the property interest, since an action of replevin can be brought for the goods. A sale differs from an agreement to sell in that in an agreement to sell, title to the goods is to pass at some future time; whereas, in a sale, it passes in the sales transaction.

There is no income to the seller under an executory contract of sale. Not until the property interest in the personalty is transferred under a sales agreement is there income to the seller.[2] This difference between a sale and a contract of sale is recognized by the board.

> The agreement. . . . constituted a *contract for sale* and not *one of sale* as there was no present intention to vest title in the subject matter thereof in the purchaser. (*Buckeye Engine Co. et al.*, 11 B.T.A. 318, 329; 1928.)

In the above case the right of the seller to take depreciation on the subject matter of the contract of sale was involved.

Title to Personalty Passes to the Buyer when the Parties Intend it to Pass—The intention of the parties controls in determining when title to personalty is transferred. Title may pass a month from the date of the contract; delivery of the goods may be deferred; payment may be deferred. If no intent is expressed, and in most cases the parties do not express their intent, the parties' conduct and the nature of the transaction will be analyzed to determine what their intent might have been.

The courts and the Board of Tax Appeals both rely on the intent of the parties in ascertaining when income will accrue where such intent can be revealed.[3] Where

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[2] *Mobile Light & Railroad Co.*, 23 B.T.A. 543 (1931).
[3] *H. S. Carter, Ex'r.*, 18 B.T.A. 853 (1929). In *John N. Derschug*, 15 B.T.A. 306 (1929), the petitioner

property is specifically identified and set aside for the buyer and where a large sum is to be paid under the contract of sale, it is commonly understood that both parties contemplate that passing of title and payment are simultaneous. (*Shillinglaw v. Com'r.*, 99 F. (2d) 87; 1939.)

One of the most frequent types of sales involves the deferred payment of the purchase price. The personal property may or may not be transferred to the buyer at the time of entering into the sales contract. In ascertaining whether or not the parties intend title to the personalty to pass at the time of entering into the contract, the board applies certain tests to deferred payment sales. Since the transfer of personalty is not encumbered with as many legal formalities as the conveyance of realty, the tests applied are not as stringent as those used under similar circumstances in the transfer of real property. Where realty is sold with deferred payment of the purchase price there is no income to the seller if the purchaser merely goes into possession and assumes the benefits and burdens of ownership. There must be something more, such as the pledging of security, the giving of notes by the purchaser, or there must be no doubt of the purchaser's solvency. But in the sale of personalty, a down payment by the purchaser going into possession and assuming dominion and control over the property is sufficient to constitute realized income to the seller of the personal property.[4] The remaining tests applied to the sale of personalty by deferred payment are just as severe as those used in the sale of realty in like cases. For example, the deferred payments must have a cash value; they must be represented by notes that are negotiable.[5] If the notes are worth less than their face value, but possess some worth, the value of the deferred payments in computing a capital gain is equal to the actual worth of the notes.[6] But if the notes should have no value and be nonnegotiable[7] or the right to deferred payments has no ascertained worth[8] there is no income realized to the seller at the time of entering into the contract of sale.

The intent of the contracting parties is relied upon by the Board of Tax Appeals in discovering when income accrues to the seller of personalty. Thus, the rules governing realization of income coincide with those applying to the passage of legal title. However, when payment of the purchase price is deferred, the board has developed its own rules for ascertaining whether or not income was realized by the seller at the time of entering into the contract. Thus, there is income to the seller if the buyer goes into possession of the personalty and assumes dominion and control over it, or if there are deferred payments that are readily marketable.

Escrow Transactions—A deed or shares of stock are deposited in escrow when the seller unconditionally divests himself of the written instrument and places it in the hands of the escrow-holder who is to turn it over to the purchaser upon the happening of a certain contingency, usually payment of the purchase price. Under the

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received $45,000 in 1919 as consideration for stock that he was to transfer in 1920. The board held that the $45,000 was taxable income for the year 1919. The petitioner made his returns on the cash receipts and disbursements basis.

Intent of the parties indicated no sale: *Stanton v. Com'r.*, 98 F. (2d) 739 (1938); *MacDonald v. Com'r.*, 76 F. (2d) 513 (1935); *Charles H. O'Shei*, 31 B.T.A 23 (1934).

4 *Hotel Charlevoix Co.*, 22 B.T.A. 170, 174 (1931): Intent of the parties relied upon in finding a completed transaction at the time when the contract was made, though payments were deferred.

Shipowners and Merchants Tugboat Co., 22 B.T.A. 1084, 1091 (1931).

5 In *Nuckolls v. United States*, 76 F. (2d) 357 (1935), and *S. L. Meyer, Ex'r.*, 23 B.T.A. 1201 (1931), the petitioners reported on the cash basis. *H. G. Stevens*, 14 B.T.A. 1120 (1929).

6 *Geo. Antonoplos et al.*, 3 B.T.A. 1236, 1240 (1925).

7 *Mainard E. Crosby et al.*, 14 B.T.A. 980, 983 (1929): Petitioner reported on cash basis.

8 *Burnet v. Logan*, 282 U. S. 404, 413 (1931): Petitioner reported on cash basis.

law, upon delivery to the buyer by the escrow-holder, the purchaser's ownership dates back to the time when delivery was made in escrow by the seller.

As in the case of deferred payments the Board of Tax Appeals has formulated a group of rules to apply to escrow transactions in ascertaining whether income is realized by the seller when he places the instrument in deposit with the third person. These rules are more lenient than those applied to realty under similar circumstances. This position in respect to personalty finds support in the legal proposition that in the sale of personalty title may pass at any time the parties intend it to pass. Therefore, intent alone, in the absence of any transfer of consideration to the seller or any evidences of consideration, such as notes or security, is sufficient to accrue income to the seller even though the personalty is not delivered to the buyer.[9] If the buyer goes into possession and assumes the benefits and burdens of ownership over a corporation, there is a stronger case for the realization of income when the seller deposits the stock of the corporation in escrow.[10] The board has held that income accrued to the seller when the stock was placed in escrow under the following conditions: (a) Where the vendor placed stock in escrow to secure notes given by the buyer for the deferred payments, the transaction was closed when the stock was placed in escrow.[11] (b) Where in the event of default by the buyer the seller could recover the stock and he had an unconditional right to the unpaid balance.[12] (c) Where the purchase price was paid in cash, a note given for the deferred payments and the purchaser assumed the benefits and burdens of ownership.[13]

[9] *Hoffman v. Com'r.*, 71 F. (2d) 929 (1934): Reversing 28 B.T.A. 1264.
[10] *John W. Sherwood*, 8 B.T.A. 103 (1927).
[11] *Jacob Carp*, 31 B.T.A. 541, 547 (1934).
[12] *Dahling v. Com'r.*, 51 F. (2d) 662 (1931).
[13] *S. O. Thompson*, 9 B.T.A. 1342 (1928).

However, if the seller's right to the purchase price is dependent upon the performance of a condition precedent, and he is not entitled to the purchase price until such performance,[14] or if the seller subjects the stock deposited in escrow to a right of recall if payments of the purchase price are not made promptly, there is no income to the seller until such condition precedent is performed.[15]

If the escrow holder should dispose of the shares of stock before he is authorized to do so under the contract of sale, there is no income to the vendor until he authorizes such disposal by the escrow-holder.[16] A similar problem arose in respect to grain stored in a grain elevator by farmers and sold by the elevator owner without authorization of the farmers.[17] The board applied the same rule used when stock was sold by the escrow-holder without authorization, that is, that there was no income to the vendor until authorization of the sale. In this case the petitioner operated a grain elevator, receiving grain from the farmers for storage. Frequently this grain was sold instead of stored, the farmer being credited with bushels rather than dollars. In determining when the petitioner realized income from these sales the board said:

> In our opinion, the petitioner should have reported no gain or profit from these transactions until it had received a request or authority from the farmers to sell their grain. This definitely fixed the price which the petitioner paid for the grain.

[14] Purchase price placed in escrow but the seller had no control over it until the performance of a condition precedent. *Held*, No income to the seller until he had control or supervision over the purchase price. *Com'r. v. Tyler et al.*, 72 F. (2d) 950 (1934). No income to petitioner reporting on cash basis when stock placed in escrow. Petitioner obtained income in subsequent year when he received the stock. *K. E. Merren v. Com'r.*, 18 B.T.A. 156 (1930).
[15] *Solomon Silberblatt*, 28 B.T.A. 73, 78 (1933).
[16] *Ganson Depew*, 27 B.T.A. 515 522 (1933). *John T. Morris*, 15 B.T.A. 261 (1929).
[17] *Magnolia Farmers Elevator Co.*, 6 B.T.A. 552, 554 (1927).

The cases dealing with the deposit of personalty in escrow are primarily concerned with certificates of stock, although it is possible to have evidences of contract rights deposited in escrow. Under these decisions there is income to the seller as soon as he unconditionally deposits the stock with the escrow-holder if the parties so intend. But if no intent is expressed and the stock of a corporation is placed in escrow, there is income to the seller at the time of deposit when the buyer goes into possession of the corporation and assumes the benefits and burdens of ownership; or when the seller has an unconditional right to the deferred payments. However, if the seller's right to the purchase price is dependent upon the performance of a condition precedent he is not entitled to realized income until the condition is performed and he has control over the purchase price. The realization of income does not coincide with the passage of legal title.

Specific Goods—Unless there is a contrary intent, if the contract of sale is (a) unconditional, (b) the goods specific, and (c) nothing remains to be done by the seller to put the goods in a deliverable state, title passes immediately on the making of the contract. The above rule applies even though the parties have postponed both delivery of possession and payment of the price to a later day.

If the contract of sale is unconditional, the goods specific and in a deliverable state there is income to the seller at the time of entering into the contract of sale. The Board of Tax Appeals expresses this rule in the following manner: Income arises to the seller when the obligations under the contract become fixed, not in a later year when the bookkeeping entries for the transaction are entered.

> The fact that all of the material sold was not shipped before the close of the year 1920 and the notes evidencing the purchase price were not delivered until January, 1921, is not material. . . . The sales contract of November 26, 1920 definitely fixed the liabilities of the parties, including that of the buyer to pay the purchase price upon delivery of the material, and nothing remained for either party to perform to make the transaction a binding one. (*Ohio Brass Co.*, 17 B.T.A. 1199, 1203; 1929.)

However, if the contract of sale is conditional, title will not pass until the condition precedent is performed. When stock is purchased on a "when-issued" basis, there is no income to the purchaser until the stock is issued.[18] Testing and inspecting a machine by the purchaser may be a condition precedent to passage of title from the seller.[19]

When the goods are specific, in a deliverable state, and the contract of sale is unconditional, income is realized by the seller at the time when the contract of sale is made. But if there is a condition precedent in the contract, such as testing and inspecting the goods by the buyer before acceptance, there is no income to the seller until such condition precedent is removed. The realization of income coincides with the passage of legal title.

Shipment on Approval—The principles of law applicable to the sale of goods on approval are similar to those applied to the sale of specific goods, except in the following respects. During the time that the buyer has for approval, title is not in him but in the seller. Title passes when the buyer approves the goods. If the goods are obtained on approval, the loss is on the seller if they are destroyed. A person has a reasonable time to approve if no time limit is set; at the end of a reasonable time he is deemed to have approved. The sale of the goods by the buyer would constitute an approval.

Where the seller ships merchandise on approval or with knowledge that it is not in accord with the contract, there is no income realized from the transaction until

[18] *Lewis K. Walker*, 35 B.T.A. 640, 645 (1937).
[19] *Webb Press Co., Ltd.*, 9 B.T.A. 239, 241 (1927).

acceptance by the buyer.[20] This rule is in accord with the legal principle governing the sale of personalty on approval.

Future or Unascertained Goods—Unascertained goods are goods which are not identified or agreed on at the time the bargain is struck. The identity depends on a description. Future goods are goods yet to be acquired or yet to be manufactured by the seller. The goods may be in existence, but must be secured by the seller.

Unless the parties stipulate otherwise, title does not pass until goods of the description called for (a) are unconditionally appropriated to the contract by the seller (b) with the consent of the buyer. Merely building a boat is not sufficient; there must be an appropriation, also assent by the buyer.

If the court cannot find an appropriation at an earlier time, then an appropriation arises when the goods are delivered to the carrier for delivery to the buyer. Title passes at this point. The carrier is considered the agent of the buyer. Delivery to his own agent by the seller does not transfer title.

In the sale of unascertained goods or goods to be delivered in the future,[21] income does not arise to the seller until the goods are appropriated to the contract by him with the assent of the buyer. Appropriation may be delivery to the carrier.[22] If the personalty is fungible goods, that is, every particle of the mass is like every other particle, such as grain, oil, or sugar, no segregation by the seller is necessary to transfer title to the buyer. But title passes at the time of entering into the contract. Coffee and fruit are not fungible goods but must be segregated by the seller from the remainder of his goods before income will accrue to the seller.[23] An appropriation to the contract is required. The realization of income coincides with the passage of legal title.

Fungible Goods—In the "sugar cases"[24] the courts have recognized that sugar is a fungible good, that is, each grain of sugar is like every other grain of sugar; and, therefore, title to a mass or part of a mass of sugar passes to the purchaser at the time of the contract. If he bought part of a mass he becomes a tenant in common in the ownership of the mass. Segregation and appropriation to the contract are not necessary as in the sale of unascertained nonfungible goods. The doctrine of fungible goods is ably discussed in *United States v. Amalgamated Sugar Co.*, 72 F. (2d) 755, 757 (1934):

> " . . . Sugar of a standard and uniform grade, in bags of one hundred pounds each, is fungible property. In that respect it falls within the same class as flour,[25] grain, or oil. Title to an unseparated part or unit of a larger quantity of fungible property passes under a valid contract of sale without separation, or segregation, if that is the intention of the parties. Segregation is not essential to the validity of a sale of chattels of that kind. The owners of respective interests are tenants in common. And that doctrine should apply in the absence of some forbidding circumstances although the property may be in two or more parts or parcels if it is a part of a common stock or supply. The contracts in question were to be filled with sugar manufactured by the company during the previous refining season and stored as a common stock in its warehouses in Utah and Idaho, for sale to its various customers. The sugar was one entity or mass although geographically separated and located in different places. The fact that it was stored in different warehouses used in the operation of the business did not render inapplicable the ordinary rules respecting the sale

[20] *Cleveland Woolen Mills*, 8 B.T.A. 49, 51 (1927).

[21] *Ewing Thomas Converting Co. v. McCaughn*, 43 F. (2d) 503 (1930).

[22] *Barde Steel Products Corp. v. Com'r.*, 40 F. (2d) 412 (1930).

[23] *Haas Bros. v. McLaughlin, Com'r.*, 39 F. (2d) 381, 382 (1930).

[24] *United States v. Utah-Idaho Sugar Co.*, 96 F. (2d) 756 (1938).

United States v. Amalgamated Sugar Co., 72 F. (2d) 755, 757 (1934).

[25] Flour is not treated as a fungible good where payment was to be made to the seller upon delivery of the goods. *Adams Roth Baking Co.*, 8 B.T.A. 458 (1927).

and passage of title to a part of fungible property without separation or segregation. . . .

"We think it is clear that title to the sugar passed eo instanti upon the execution of the contracts and that thereafter the company held it in bailment for the respective purchasers."

If fungible goods are sold, the seller realizes income at the time of entering into the contract of sale. The realization of income coincides with the passage of legal title.

C.I.F. and F.O.B. Contracts—If goods are delivered to a carrier C.I.F., title passes immediately to the buyer upon giving the goods to the carrier. C.I.F. means that the total *cost* of the goods includes *insurance* and *freight*.

When goods are shipped F.O.B., "free on board," title passes to the buyer at the F.O.B. point. If goods are shipped F.O.B. Philadelphia, title passes there. The seller pays the freight to the F.O.B. point. He pays the freight on his own goods. However, slight evidence of a contrary intent will change the rule.

The courts and the board follow the law in holding that income accrues to the vendor when the goods are delivered to the carrier under a C.I.F. contract, or are delivered to the F.O.B. point under a "free on board" contract.[26]

Sales by Sample—In a sale by sample upon receipt of the goods the buyer has a reasonable time to compare the goods with the sample before acceptance. If he makes no examination within a reasonable time, an acceptance of the goods will be implied.

When a sale is made by sample, there is no income realized by the seller until the buyer accepts the goods. Acceptance takes place when the buyer examines the goods and compares them with the sample, and the goods correspond with the sample; or when a reasonable time for examination expires.[27] The realization of income coincides with the passage of legal title.

In summary, the time at which legal title passes under a sale of personal property is a valid test to apply in ascertaining when income accrues from the sale of personalty. The principles of the Uniform Sales Act may be followed in all sales transactions except those involving deferred payments and escrow transactions. In these two types of sales the Board of Tax Appeals has developed tests of its own to apply in determining when income is realized. These tests will be summarized after the discussion of time of income realization from the sale of realty.

INCOME REALIZATION FROM REAL PROPERTY

In the eyes of the law land has occupied a favored position since the days of early England. The rules governing passage of title to realty are more strict than those applying to the transfer of title to personalty. Exactly how much weight the Board of Tax Appeals gives to this legal difference between personalty and realty will be observed in the cases where income arises to the seller when the deed is transferred to the buyer; when the deed is not transferred, but the buyer is in possession and the payments are deferred; when income arises from escrow transactions; from timber sales; from property taken by eminent domain; or from conveyances in violation of the statute of frauds. Inasmuch as the law applying to the transfer of realty does not vary according to the nature of the sales transaction as does the law of sales of personal property, but is limited to a few basic principles, such as the delivery of the deed, the legal principles will be considered first in this part of the paper, rather than presented at the beginning of each section as in the previous portion.

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[26] *East Coast Oil Co.*, 30 B.T.A. 558, 561 (1934); *Brown Lumber Co., Inc. v. Com'r.*, 35 F. (2d) 880, 882 (1929); *Rialto Mining Corp.*, 25 B.T.A. 980 (1932).

[27] *Morrison Woolen Co.*, 10 B.T.A. 8, 10 (1928).

The Law Applying to the Transfer of Title to Realty—Legal title to land is transferred by the delivery of a deed from the seller or his agent to the buyer. The deed must be in writing, identifying the land, and be signed by the seller or his agent duly authorized in writing to sign for his principal. The deed must be supported by consideration or be placed under seal. Under the law the vesting of legal title in the buyer arises only when the seller transfers the deed to the realty to him, unless, of course, the person in possession of the land obtains it by adverse possession or the purchaser under an oral contract of sale goes into possession and makes valuable improvements. In such cases a deed is not required to transfer title. Under a contract for the sale of land the courts will recognize an equitable title in the buyer, for he may obtain the legal title by demanding specific performance of the contract. An unpaid seller, even though he may not have legal title to the property, also possesses equitable rights in the property. The cases analyzed in the reports of the Board of Tax Appeals frequently treat income as realized when the buyer or seller obtains these equitable rights under the contract of sale of realty, and not when the legal title is transferred by deed.

When the deed to land or the purchase money for the payment of land is placed in escrow, the deed or the consideration is unconditionally delivered to a third party, neither the buyer nor the seller. For instance, the escrow-holder will keep the deed until the seller obtains a certification of title; at which time the buyer will be obligated to pay the purchase price; and the escrow-holder will then deliver the deed to the purchaser. When the deed is in escrow the escrow-holder has the legal title; the buyer and seller, equitable rights. When a deed is released from escrow to the buyer the date of delivery dates back to the time when the seller deposited it with the escrow-holder.

Income to the Seller when the Deed is Transferred—When the buyer is not in possession before the transfer of the deed, but goes into possession at the time of such transfer, income is realized by the seller when the deed is transferred. The foregoing is the general rule, and it will be applied even though payments were made by the purchaser on the contract before the deed was transferred; or even though the deed was transferred before payment of the purchase price was consummated. If the petitioner should report on the cash receipts and disbursements basis and the transfer of the deed is dependent upon the payment of the purchase price, the board uses the cash receipts and disbursements method of reporting income to supplement the rule that income arises to the seller when the deed is transferred to the purchaser. The cases holding that income is realized by the seller when he delivers the deed to the realty fall into three definite classes. Those in the first group present the most common factual situation; for transfer of the deed is dependent upon the performance of a condition precedent by either the buyer or the seller. The most frequent condition precedent is payment of the purchase price by the buyer.[28] However, it may be the presentation of a satisfactory abstract of title by the seller or the running of a survey.[29] In the second group of cases the deed is transferred upon payment of a substantial part of the purchase price;[30] the delivery of the deed is not delayed as in the first group until full pay-

[28] *North Texas Lumber Co. v. Lucas*, 281 U. S. 11 (1930); *Baird v. United States*, 65 F. (2d) 911, 912 (1933); *Bourne v. Com'r.*, 62 F. (2d) 648 (1933); *Steiff et al. v. Tait*, 26 F. (2d) 489 (1928); *Charles C. Hanson*, 23 B.T.A. 590 (1931); *W. J. and J. D. Griffith*, 10 B.T.A. 799, 802 (1928).

[29] *Gilbert Creek Land Co.*, 14 B.T.A. 921, 930 (1928).

[30] *William C. King*, 10 B.T.A. 308 (1928); *Maro Brownfield*, 8 B.T.A. 1164 (1927); *Pennsylvania Co. for Insurance on Lives, Etc.*, 19 B.T.A. 699 (1930): Deferred payment secured by Pennsylvania ground rent.

ment of the purchase price. The cases of this group enunciate the rule that if a transaction is closed and completed except for deferred payments the profit is taxable in the year in which the transaction was completed. However, *Otto Braunwarth*, 22 B.T.A. 1008, 1022 (1931) modifies the above rule as follows:

> It is clear that title to the property passed to the vendee in 1920 and that the vendee took possession of the property in that year. It is clear that the transaction was closed in that year. It does not necessarily follow, however, that the entire profit is taxable in that year. If property is sold for cash the entire profit, of course, is taxable in the year of sale. If property is sold for cash and deferred payments, the entire profit is taxable in the year of sale if the deferred payments have a readily realizable market value or are equivalent of cash. . . . But if the deferred payments do not have a readily realizable market value, the vendor is entitled to first recover his capital investment before any profit arises and any payments in excess of such capital investment constitute income *in toto* in the years received.

In the final group of cases legal title is transferred before payment of the purchase price.[31] Nevertheless, as in all of the cases that fall under the general rule, income is realized by the seller when the deed is delivered to the buyer and not when payment is made. The realization of income coincides with the passage of legal title.

Income at Time of Contract of Sale when Deed is Not Transferred—Transfer of the deed or passage of legal title is only one test applied by the courts and the board in determining when income is realized by the seller of realty. There have been circumstances in which they have felt that the application of this principle would not accurately reflect the moment at which income accrued to the seller. Therefore, under certain factual situations the courts and the board have held that there is income to the seller even though he made no transfer of the legal title. Where the buyer goes into possession of the realty at the time of the contract, assumes the benefits and burdens of ownership, and payment of the purchase price is deferred, income will be realized by the seller provided that the purchaser is solvent and able to pay the amount of the deferred payment,[32] a substantial part of the consideration has been received and the deed placed in trust,[33] or the seller upon default is entitled to all payments made under the contract and to repossess the subject-matter of the sale.[34]

There is no income to the seller at the time of entering into the contract of sale if the seller's right to the payment of the purchase price is conditioned upon certain contingencies over which the purchaser has control, such as running a survey of the property to his satisfaction, and the purchaser is not in possession of the property, nor has he given any notes or mortgages to secure payment.[35] However, in the sale of cemetery crypts, where the cemetery association kept its books on an accrual basis, the board has held that there was income to the association as the payments for the crypts *accrued*, not when the payments were received. In this case a mausoleum was in the process of being

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[31] *Com'r v. North Jersey Title Ins. Co.*, 79 F. (2d) 492 (1935); *Mosher Manufacturing Co.*, 7 B.T.A. 187, 195–6 (1927): Income to seller when he delivered deed to trustee in 1919, not in 1918 when agreement was made.

[32] *Davidson and Case Lumber Co. v. Motter*, 14 F. (2d) 137, 140 (1926).

[33] *W. H. Hay*, 25 B.T.A. 96, 101 (1932). In *Standard Lumber Co.*, 28 B.T.A. 353, 355 (1933) income dated from the time of entering into the contract of sale. Petitioner contracted to purchase certain timber in 1925. In payment petitioner agreed to convey its own lands and the balance to the represented by notes. Petitioner's vendor had a right of immediate possession, although the deed was not delivered until 1926 when the title had been approved.

[34] *Nibley-Mimnaugh Lumber Co.*, 26 B.T.A. 978, 984 (1932); *Walter H. Schoellkopf*, 4 B.T.A. 1032, 1037 (1926); *Birdneck Realty Co. v. Com'r.*, 25 B.T.A. 1084, 1089–90 (1932).

[35] *Higgins Est., Inc. v. Com'r.*, 30 B.T.A. 814 (1934); *E. K. Wood Lumber Co.*, 25 B.T.A. 1013, 1028 (1932): No income to seller at time of entering into executory contract of sale containing a forfeiture clause. Washington law relied upon in reaching decision.

erected and the persons who contracted to purchase crypts were to make payment of certain percentages on ten day demand as the building progressed toward completion. The purchasers were not in possession.[36]

When both delivery of the deed and payment of the purchase price are deferred there is income to the seller when the buyer enters into possession, assumes the benefits and burdens of ownership and is a solvent purchaser or the seller possesses an unconditional claim and security for the purchase price. The realization of income does not coincide with the passage of legal title.

Escrow Transactions—When the seller places the deed in escrow, he realizes income at the time of deposit with the escrow-holder if in addition to making a down payment the purchaser is solvent;[37] or he has paid almost half of the purchase price and has assumed the benefits and burdens of ownership in the realty.[38] However, if the seller reports on the cash receipts and disbursements basis, has gone into control of the premises, paid part of the purchase price, and has given no notes for the balance there is income to the seller only when the payments are received.[39]

If the purchase price is placed in escrow, to be released to the seller upon the performance of a condition precedent, there is realized income to the seller when he is entitled to the purchase money.[40] Furnishing a satisfactory abstract of title is the usual condition precedent. However, the right to deferred payments placed in escrow must be readily marketable.[41]

When a deed is deposited in escrow there is income realized by the seller from the time of deposit if the sale is made to a solvent purchaser, or the purchaser has gone into possession and paid a substantial part of the purchase price. But if the purchase price is in escrow, to be released upon the performance of a condition precedent, there is income to the seller as soon as the condition precedent is performed and he obtains control over the purchase price. However, this right to deferred payments placed in escrow is not realized income unless it is readily marketable. The realization of income does not coincide with the passage of legal title.

Timber Sales—In timber sales it is of legal importance to distinguish between the sale of land containing timber and the sale of a right to cut timber. However, the courts in considering when the seller realizes income apply the same test to either situation. Undoubtedly, the identical test is used because in all of the contracts of sale the purchase price is computed upon the amount of timber cut or used. Since this amount is uncertain until the consummation of the contract, the courts state that there is no closed transaction until the contract is completed and the purchase price ascertained. In *Com'r. v. R. J. Darnell, Inc.*, 60 F. (2d) 82 (1932) timber, a sawmill and its equipment were transferred under the contract of sale. The deed was delivered to the buyer in 1920 when he made a down payment of $100,000. Notes were given for the balance of the purchase price. The court held that there was no closed transaction until the notes were paid; pointing

[36] *Evergreen Cemetery Ass'n. v. Brunet*, 45 F. (2d) 667, 669 (1930).

[37] *Com'r. v. Moir*, 45 F. (2d) 356 (1930): The state law of Illinois was also relied upon to treat income as realized at the time when the contract of sale was made and the deed delivered in escrow, for upon release from escrow delivery of the deed dated back to the time of deposit with the escrow-holder.

[38] *Dakota Creek Lumber & Shingle Co.*, 26 B.T.A. 940 (1932).

[39] *Old Farmers Oil Co.*, 12 B.T.A. 203, 214 (1928).

[40] *Bedell v. Com'r.*, 30 F. (2d) 622 (1929); *Wm. Holden v. Com'r.*, 6 B.T.A. 605 (1927); *R. M. Waggoner et al.*, 5 B.T.A. 1191, 1204 (1927).

[41] *Otto Braunwarth*, 22 B.T.A. 1008, 1022 (1931); *Old Farmers Oil Co.*, 12 B.T.A. 203, 214 (1928): The board indicated that the deferred payments had no cash value.

out that the price could not be determined until the end of the contract. This case is similar to *Otto Braunwarth*, 22 B.T.A. 1008, (1931), wherein the seller transferred the deed before receiving the deferred payments; and the right to the deferred payments was not income because it had no readily marketable value. Likewise, in the *Darnell* case the amount of the deferred payments is not definite; therefore, there is no income realized by the seller.

The same rule is applied in contracts involving the sale of a right to cut timber, payment to be made in stock. There is no income to the seller until he receives the stock in payment of the timber cut.[42] Therefore, whether timber is sold by a transfer of the land containing the timber, or by the sale of a right to cut the timber, if notes are given for deferred payments and the purchase price is dependent upon the amount of timber cut or used, the seller realizes no income until the purchase price is ascertained—at the completion of the contract. The realization of income does not coincide with the passage of legal title.

Realty Taken by Exercise of Power of Eminent Domain—Although realty may be taken from an owner under the power of eminent domain several years before the final award is decreed, there is no income realized by the owner until the award is made. For until the award is legally decreed, income is indefinite and unascertained.[43] Since there is no income realized by the seller until the award is made the realization of income does not coincide with the passage of legal title from the owner.

Conveyance of Land in Violation of Statute of Frauds—In most states an oral conveyance of realty will not be recognized as transferring legal title, unless the purchaser also goes into possession and makes improvements. However, the Board of Tax Appeals recognizes an executed oral sale of realty contrary to the Statute of Frauds as producing taxable income.

In 1918 petitioner made a bona fide sale of land to his son pursuant to a verbal agreement. The son took possession and both parties abided by their agreement, though petitioner did not execute a deed to his son, who agreed to sell at a profit in 1920. Petitioner executed the deed to the subsequent purchaser and received the consideration, but accounted therefore to his son, thus completing the verbal transaction. The respondent objected to the validity of the sale as being within the operation of the statute of frauds. *Held*, that the respondent, who was not in privity with either of the parties, could interpose no objection to the petitioner and his son being bound by their verbal agreement executed to their satisfaction. *Held, further*, that the profit from the sale in 1920 was income to the son. (*Francis M. Camp*, 21 B.T.A. 962, 963; 1930.)

The realization of income does not coincide with the passage of legal title.

CONCLUSIONS

The conclusions derived from an analysis of the cases cited may be prefaced by observations of certain factors which may have influenced the decision of the courts and the Board of Tax Appeals. These factors are the weight given to local state law, to bookkeeping entries, and to the accounting basis used by the petitioner.

The courts and the Board of Tax Appeals in ascertaining the realization of income may follow the law of the state in which the transaction arose, though, it is sometimes ignored.[44] But if the local law governing the transfer of legal title will supplement the decision it will be relied upon in determining when the petitioner

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[42] *Brown v. Com'r.*, 69 F (2d) 863 (1934; *Peavy-Wilson Lumber Co. v. Com'r.*, 51 F (2d) 163 (1931).

[43] *Baltimore & Ohio Railroad Co. v. Com'r.*, 78 F. (2d) 460 (1935); *Patrick McGuirl, Inc. v. Com'r.*, 74 F. 729 (1935).

[44] *Roy v. Com'r.*, 49 F (2d) 786 (1934); *Dakota Creek Lumber & Shingle Co.*, 26 B.T.A. 940, 944 (1932); *Birdneck Realty Co.*, 25 B.T.A., 1084 (1932).

obtains income.[45] The taxpayer should not rely only on local law applying to the sale of property, but should study the case law developed by the Board of Tax Appeals if he seeks to know the time at which he realized income from a transfer of real or personal property.

The bookkeeping entries of the petitioner are not conclusive evidence of the realization of income. The board may rely upon such entries in substantiating its position.[46] However, it is not obligated to accept them.[47] The intent of the parties as expressed in words or their actions under the circumstances are given more weight than bookkeeping entries by the board in discovering when the petitioner realizes income. Bookkeeping entries are an element in ascertaining the intent of the parties.

Whether or not the petitioner reports his income for tax purposes on the cash receipts and disbursements basis is important in the decisions of the board. Since the general rules that will be subsequently considered apply to the accrual method of accounting, reports on the cash basis will tend either to substantiate a rule or to modify it. Thus, in the sale of personalty, if the seller is reporting on the cash receipts and disbursements basis there is income realized when the purchase price is received, even though the payment of the price has preceded transfer of the personalty;[48] likewise, there is income only when deferred payments are received, if the deferred payments have no market value.[49] Where realty is sold, delivery of the deed conditioned upon payment of the purchase price, the cash basis is used to supplement the board's decision that income is realized by the seller when the deed is transferred.[50] When a deed to realty is placed in escrow under a deferred-payment sale, and the deferred payments have no cash value, the seller reporting on the cash basis realizes income only when he receives the payments.[51] To a petitioner reporting his income from a sale of property on a cash-receipts-and-disbursements basis, there is income equivalent to the amount of actual cash received. However, if the price is paid through deferred payments, the seller realizes income at the time of entering into the contract only if the obligations representing the deferred payments or the payments themselves have a cash value or are readily marketable.

In previous pages the writer has attempted to classify the decisions of the Board of Tax Appeals pertaining to time of realization of income from the sale of property. Although the cases themselves make no clear-cut distinction between those dealing with real property and those considering personal property,[52] the writer has attempted to place the cases into a legal mold based upon such a distinction. The conclusions from this form of analysis naturally fall into three groups:

I. When passage of legal title coincides with the realization of income from the sale of personalty:

1. There is no income to the seller from an executory contract of sale.
2. In ascertaining whether or not there is an executed sale the verbal expressions of the parties will be relied upon; if they are inadequate, then their intent will be sought from the surrounding facts and circumstances.

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[45] *Com'r. v. Moir*, 45 F. (2d) 356 (1930).

[46] *Evergreen Cemetery Ass'n. v. Burnet*, 45 F. (2d) 667 (1930).

[47] *Higgins Est., Inc. v. Com'r.*, 30 B.T.A., 814 (1934).

[48] *John N. Derschug*, 15 B.T.A. 306 (1929).

[49] *Burnet v. Logan*, 283 U. S. 404 (1931); *Mainard E. Crosby et al.*, 14 B.T.A. 980 (1929).

[50] *Bourne v. Com'r.*, 62 F. (2d) 648 (1933); *Stieff et al v. Tait*, 26 F. (2d) 489 (1928); *Maro Brownfield*, 8 B.T.A. 1164 (1927).

[51] *Old Farmers Oil Co.*, 12 B.T.A. 203 (1928).

[52] In *Shipowners and Merchants Tugboat Co.*, 22 B.T.A. 1084, 1091 (1931), a case dealing with the sale of personalty, *Grace Harbor Lumber Co.*, 14 B.T.A. 996 and *Davidson & Case Lumber Co. v. Motter*, 14 Fed. (2d) 137, cases dealing with the sale of realty, were cited to prove when title passed. Likewise, in *Ohio Brass Co.*, 17 B.T.A., 1199, 1203 (1929).

3. Unless a contrary intent can be discovered if the goods are specific and in a deliverable state, the contract of sale unconditional, income is realized to the seller at the time when the contract of sale is made.
4. In C.I.F. contracts income accrues to the seller upon delivery to the carrier; in F.O.B. contracts upon reaching the F.O.B. point.
5. In the sale of unascertained goods there is no income to the seller until he appropriates the goods to the contract with the assent of the buyer.
6. If fungible goods are sold, income arises to the seller at the time of entering into the contract of sale.
7. When a sale is made by sample there is no income to the seller until acceptance; acceptance takes place when the buyer has had a reasonable time to examine the goods and compare them with the sample.

II. When the passage of legal title coincides with the realization of income from the sale or transfer of realty: If the purchaser is out of possession and possession is transferred with the deed, there is income to the seller upon the transfer of the deed.

III. Situations in which the courts and the Board of Tax Appeals do not follow the law, but have developed a group of principles of their own. This separate body of rules has been applied in ascertaining income from the sale of personalty or realty in which deferred payments are involved; in determining income from escrow transactions dealing with both personalty and realty; in discovering income from timber sales, the sale of realty contrary to the Statute of Frauds, or gain from property taken through the exercise of the power of eminent domain. From the various tests that the courts have used in the above cases in determining realization of income, five principles can be evolved. Since higher standards were set up in the rules applicable to realty, a principle applicable to realty will equall govern personalty. Therefore, it is possible to say that

1. Where payment of the purchase price is deferred and the buyer goes into possession of the personality or realty and assumes the benefits and burdens of ownership there is income to the seller at the time of entering into the contract (a) if the purchaser is solvent, or (b) the deferred payments are definite, ascertained, and are readily marketable for cash. Note that the above test covers situations in which the deferred payments may represent merely a contractual right to repossession and liquidated damages or a legal obligation, such as a note. If personality is sold upon the basis of a deferred payment of the purchase price, there is income realized by the seller at the time of entering into the contract when the buyer goes into possession and assumes the benefits and burdens of ownership at that time.
2. Where a deed or personalty is unconditionally placed in escrow and the payment of the purchase price is deferred, there is income realized by the seller from the time when he deposited the subject-matter of the sale with the escrow-holder if (a) the purchaser is solvent; or (b) the buyer goes into possession and pays a substantial part of the purchase price. The seller must not reserve any control over the subject-matter after he deposits it with the escrow-holder. Mere intent of the parties is sufficient to realize income to the seller upon deposit of personalty with the escrow-holder.
3. Where the purchase price is in escrow there is income realized by the seller when he obtains control over the purchase price and it is readily marketable.
4. Where the consideration received from the transfer of realty cannot be ascertained, there is no taxable income until such consideration is definitely determined. This principle applies to conveyances of timber land in which the purchase price is based upon the amount of timber used; and to cases in which land is taken through the exercise of the power of eminent domain, and the compensation is not known until the legal award is made.
5. Where the seller obtains income from an executed contract to which the buyer might have raised a valid legal defense, but did not, there is realized income to the seller. This principle is derived from the case in which the seller derived income from a conveyance of land in violation of the statute of frauds.

It is believed that the principles outlined in this paper will serve as convenient guides and working tools for the accountant, lawyer, or student confronted with the problem of time of income realization from the sale of real or personal property.

COST ANALYSIS BY STANDARDS IN THE ACCOUNTS

RANALD G. RUCKER

A BASIC concept of cost accounting is necessary before one attempts to evaluate a particular type of cost-accounting system. Varying and narrow concepts of the function of cost accounting cause much of the controversy as to the relative merits of the various systems. As a starting point, it may be said that cost accounting is not a separate and distinct field, but is merely a phase of the general accounting. A cost-accounting system should "tie in" or be coordinated with the general accounting system, for both are concerned with the transactions and status of a single business entity which operates for the purpose of making a profit.

The function of accounting, in a broad sense, is to furnish interested parties with certain information when it is needed. This function may be viewed from the uses to which the information is put. Among them are the following: (1) pricing policy of product; (2) other policy formation (products to produce—plant extentions—discontinuance of departments or products—and similar phases); (3) preparation of periodic statements; (4) control of operations with the object of securing efficient production. The relative importance of the various uses of cost data will vary greatly with the type of industry, size of the business, and other circumstances; but management realizes that there are various possible uses and makes such use of cost data as circumstances necessitate.

But it is not sufficient for cost accounting merely to furnish information. The information furnished should approach the "truth" as nearly as possible. "Truth" in itself is indefinite, intangible, and unmeasurable; but it is generally agreed that "truth" exists. In the complex business world, there is much disagreement as to what is "true," but the object or goal of cost accounting should be to approach this ideal of "truth" in the information furnished. To accomplish this object, it is necessary to avoid practices designed to show artificially favorable results, to mislead the public, and to hide responsibility.

Standard costs have their place in this picture of the function of cost accounting. Standard costs are predetermined costs based upon the specifications of a product and resulting from a "scientific" analysis of what the price and usage factors of material, labor, and overhead should be at normal production. The term "standard" suggests a point of departure: standard cost is a norm from which actual or historical costs will usually vary and with which they will be compared. Standard costs serve as a "yardstick" or measuring device—to compare actual costs with what they should be. It has been stated that "any standard is better than no standard." The statement conveys the idea that the mere process of attempting to determine what cost should be is beneficial. A true standard is never an estimate of what the object to be measured *will be*, but is a statement of what the object *should be* in order to attain certain objectives. In standard costs, the item being measured is efficiency—efficiency of acquisition and use of all elements of production cost.

Since standard costs are predetermined costs, they are consistent with the proper viewpoint of forward-looking manage-

ment. Historical or actual cost systems present "post-mortem" data which are of value mainly as a record of what did happen. Standard costs, however, look toward the future; together with a related budget system they stress the operations and transactions of the future period. They facilitate a continuous day-to-day control of operations rather than a comparison of past results which are beyond control. This change in viewpoint toward business operations and its resulting facilitation of control by management is a major advantage of standard costs over an actual-cost system, even though it be admitted that many of the advantages may be attained without the actual use of standard costs.

Cost standards may be established and used for control purposes without bringing the standards in the accounts. These cost standards together with a budget provide a "forward view" though the accounting records themselves may be maintained at actual cost. However, even from the control aspect, standard costs (used in the accounts) are superior to cost standards, for the results of the "theory of exception" or off-standard performances are systematically set out separately in variance accounts. Various types of waste and inefficiency are thus portrayed in a manner that will avoid the danger of their being overlooked. Any variance below standard serves as a warning and a starting point for determining the cause of the variance and correcting the off-standard condition if possible. The current day-to-day control may not start with a variance-account balance, but the total variance for a period is analyzed and this assures that every variance is eventually considered. Other advantages of standards in the accounts will be mentioned later.

Interpretation of the term "standard" varies: There are basic standards, and current ideal standards subdivided into average-capacity and practical-capacity standards. What should be standard? To answer this question without bias, one must keep in mind the previously-mentioned goal of a cost-accounting system—to furnish truthful information when it is needed. In the previous paragraph, it was pointed out that standard costs furnish information when it is needed, that is, currently for control and as a pricing-policy base. However, any variation of a standard cost system will fulfill this requirement. The question "what type of standard will best fulfill the requisite of truthful information?" remains unsolved. Plainly evident in many interpretations of standard cost is the influence of the actual-cost school of thought. Even among those who favor standard costs as a result of their adaptation to control and bookkeeping simplicity, there are some who believe that actual cost remains as the "true" cost of product units. Others advance a step and by using an average-capacity burden rate eliminate a portion of the fixed expense of idle plant capacity from cost of product and set it up as an activity variance. The practical-capacity group goes even further and eliminates the entire fixed expense of idle capacity. Finally, the advocates of current-ideal-standard costs carry the theory of normal burden to all elements of manufacturing cost, materials, labor, and burden.

Current-ideal-standard costs, which are the "standard costs" of this discussion, are based on the theory that the actual cost of production is really composed of two elements—"true" cost of product, and cost of waste and inefficiency. Cost of product is predetermined "scientifically." Any variance of actual cost of production from the predetermined normal cost of product is cost of waste or inefficiency, and is accounted for as a separate item. The standard cost of product is known in advance and does not

fluctuate with changes in volume of production or varying efficiency; it is a cost that is adaptable as a base for pricing policy. Opponents of standard cost as a pricing-policy base argue that the actual cost of production must be recovered if the business is to survive, a contention quite true in the long run, but it attempts to solve a complex problem in an easy way.

Theoretically, modern business operates under a system of competition. Management must consider the competitive price when forming a pricing policy. Moreover, the cost of product used in price setting is only a base with which to start. Administrative and distribution expenses must be considered; a profit margin will be expected; and management will wish to set prices which will in the long run cover any losses incurred. If the cost of waste and inefficiency were treated as a loss, it would not prevent management from forming pricing policies with the object of recovering the "true" cost of producing and selling, and the losses of the waste in addition, if the "traffic will bear it." Such treatment would, on the contrary, tend to produce more intelligent pricing policies in relation to a fluctuating market: Management, knowing the individual items of cost and what the charge to the customer represents, does not thereby forego the necessity of recovering the cost of waste and inefficiency from the customer. Standard costs merely require that these losses be considered apart from the cost of product, and that they be of aid to management in discovering and eliminating the causes of waste.

The interplay of the competitive price system tends to eliminate inefficient producers and protect the consumer. Yet it is not beyond reason to believe that management has the duty, to itself and to society, to produce not only as efficiently as the average business in the industry, but as efficiently as individual circumstances will permit. Standard costs stand ready to aid management in this respect.

The acceptance of standard costs as true costs of product justifies their use in a cost system which fulfills the function of cost accounting in every detail. The advantage of standard costs in the accounts for control purposes has been pointed out. Since standard costs are true costs, no objection should arise when inventories are priced at standard cost. This has been a debated point, but the objection arose from the inertia of the idea that actual cost is "true" cost of product. Standard costs in the accounts provide the added advantage of eliminating much of the detail of the actual cost systems and decrease the expense of cost accounting. Cost accounting being merely a tool of management must pay its own way, and standard costs furnish the best information for all purposes at a reasonable cost.

All that has been said previously in relation to standard costs has been based on the assumption that the standards in use were correctly calculated. If the standards are not set correctly, the information furnished is of little value and may be misleading. Standards are set as a result of a scientific analysis of a number of factors: specifications of product, prices, normal production, and similar circumstances of the particular business. Three standards are required—price, usage, and production. The production standard is normal production. In order to be consistent with the theory that waste is a loss, practical capacity should be used as normal. The price and usage standards apply to each of the three elements of manufacturing cost—materials, labor, and overhead. Moreover, the phrase, current-standard costs, connotes prompt revision of standards as product specifications and acquisition prices change. The setting of correct standards is fundamental, but the ideal of a current standard cost system is

not attained unless the standards remain current or up-to-date at all times.

Usage standards are adaptable to scientific methods and on the whole present little trouble. The engineering department is mainly responsible for their determination. A unit of product may be used as a base. Examination and measurement will reveal the quantity and quality of material required after allowance is made for unavoidable waste. Time and motion studies under normal working conditions with allowance for normal delays will indicate the direct labor time which should be required by an average worker under normal working conditions. The standard time of each operation is secured as well as the total time for the product unit. As a result, there is a record of the standard time of every operation performed in any productive department. The tests should be repeated over a period of time under various working conditions and with various workers before the standard to be used is set. Burden usage is automatically "tied" to the direct-labor-usage standard when burden is applied on the direct-labor-hour basis. Usage standards when set correctly continue without change until a change in the specifications of the product or perhaps a change in equipment or operation used necessitates it.

It is chiefly the price standards that draw the criticism that the standards must be changed frequently in order to remain true standards. The criticism cannot be disregarded, and it leads to several problems related to price standards. Standards have been presented as a norm of what an item should be. Price standards should indicate what the price of materials, labor, and overhead items should be. Usage standards are controlled by the specifications of the product, but control over prices is not entirely an internal factor. To answer the question "What should price be?" a number of factors must be considered. The "scientific" approach should be used wherever possible. Thus, for materials, cost includes not only the purchase price, but also transportation charges. The economical quantity to purchase, the quantities needed, the quality required, the sources of supply various transportation facilities and routing, must also be considered. In conjunction with these data, it is necessary to consider past and present prices and the market trend before it is possible to set a standard price. The final result is based more or less on forecasting future prices, and the standard set remains a standard only until the market price of the material fluctuates. Minor fluctuations need not invalidate the standard. A major part of the uncertainty of the standard price may be removed, however, if the material can be contracted for in advance.

The problem of setting wage rates and burden expenses is similar to that for materials. A forecast of the labor market and supply prices must be coordinated with the requirements of the business in order to determine standard prices. Wage rates present the additional problem created by incentive wage plans. The fact that standard prices may be difficult to determine and that they are subject to the external influence of fluctuating market prices which may necessitate more or less frequent revision of standard prices is not a valid criticism of the theory of standard costs. The problem merely stresses the necessity of using extreme care in the preparation, revision, and interpretation of price standards. It should be realized, however, that the price standards, as is true for all standards, are significant only in relation to the business for which they are set.

Emphasis has been placed upon the importance of correct standards because the standards are to be used for purposes that require a correct base, that is, pricing

policy, pricing of inventories of work in process and finished goods, and comparison with actual cost for control. The method of keeping standards in the accounts is more or less immaterial; various alternatives are possible and the method chosen in an individual case may be adapted to the nature of the business and operations, the type of product, and the ideas of the system designer. Regardless of the design of the system, the actual cost of acquired services and commodities must be recorded and at some point in the procedure variances of actual cost from standard are set up and work-in-process is charged with standard cost.

The types of variations are as follows: material price, material usage, wage rate, labor efficiency, burden expense, burden activity, and burden efficiency. The number of variation accounts to be used is a matter of necessity and choice, but the interpretation or analysis of the variations will follow the seven distinct variations. The variations for material and labor are probably self-explanatory since a price variation is determined by multiplying the actual quantity by the difference between the actual and standard price and a usage or efficiency variation is computed by multiplying the difference between the actual and standard quantity by the standard price. The burden-expense variation is the difference between the actual burden and the budgeted burden at that activity. The burden-activity variation is the fixed expense of unused capacity. The burden-efficiency variation is the burden expense caused by excess (or below-standard) direct-labor time, and is computed by multiplying the difference between actual direct-labor hours and standard hours by the standard burden rate (assuming direct labor hour standard burden rate).

The determination of variations results from bookkeeping procedure when standards are used in the accounts, but the determination of variations is only a means to an end. The variations must be interpreted and analyzed by or for management. The results of the interpretation should lead to necessary corrections, if possible, in operations, in order to improve efficiency and decrease waste. To attain the best results, responsibility must be fixed and any off-standard work should be identified with the individual responsible.

After variations have been used as a tool for control, the problem of disposition remains. Various treatments of the variations have been used in practice as a result of differences in opinion and uncertainty as to the nature of variation balances. The actual-cost school considers that the portion applying to inventories should be used to adjust them for statement purposes and the part applying to goods sold should adjust cost of sales. The standard-cost theory is that a variation is a loss or a gain. Losses do not attach to product. They expire immediately and should be carried to the income statement as a loss deductible from gross manufacturing profit and not as an item in cost of sales or inventory. The difference in opinion between the actual-cost and standard-cost groups arises partially from the difficulty of strict adherence to theory in practice. Many who prefer to adjust standard-cost figures to actual cost for statement purposes do so because they feel that the standards used are not true current standards. This belief justifies hesitancy in using standard costs for statement purposes. However, it does not weaken standard-cost theory, but only indicates that those who use standard costs should keep as near as possible to correct theory if standard costs are to gain the respect which they deserve.

Theoretically, a standard is what something should be. The methods and related difficulties of setting standards for various

elements of cost have been mentioned previously. The fact that a standard for labor is based on the average workman and normal working conditions makes the labor standard an average standard within certain limits. The standard production rate per workman in a department may be ten pieces per hour. X may normally produce nine pieces; Y, eleven pieces; and Z, ten pieces. If the hourly wage rates for each are the same, there would be no variation from standard cost during a period provided each workman produced at his normal rate. However, the net result of zero variation is the algebraic sum of a variation gain for Y equal to a variation loss for X. Though a usage variation is considered apart from its related price variation, it is necessary to remember that each variation may be the algebraic sum of losses and gains. Therefore, in a minute analysis of variations, there will be both gains and losses. The variation gains are in the nature of savings. Net variations for an element of cost, which are the variations generally spoken of, are losses and not gains if the standards in use are true standards. The object of standards and human fallibility result in this tendency toward net variations, but it depends upon prompt revision of standards as circumstances warrant such revision. Prompt revision, though required by theory, is not always immediately possible in practice and net variation gains for an element of cost may result. Occasional variation gains of this type need not condemn the use of standard costs for statement purposes, though continuing variation gains or gains of material amount indicate weak or noncurrent standards. In addition to the algebraic nature of a net variation for usage or for price, the counteracting effect of price and usage tends to eliminate net variation gains for an element of cost. If managerial control is efficient, the variations for labor and materials will be relatively negligible and any gain or saving which might arise from super-efficiency in purchasing or temporary failure to revise price standards, in many cases will be less than the usage loss and thus result in a net variation loss. Throughout the discussion, variation losses are stressed because it is assumed that standards are correctly set and promptly revised.

The disposition of variations as gains or losses is justified when standards are correctly set and currently revised. Uncontrollable fluctuation of prices to any great extent necessitates a revision of price standards in order to justify price variations as losses or gains. The probable necessity of more or less frequent revision of price standards may raise the question of whether price standards pay for themselves but careful consideration does not seem to support this contention.

As is true for all standards, a price standard is a measure of waste and inefficiency. Someone must be responsible for every act and for every price which is off-standard. Price standards assist in pointing out off-standard prices arising from actual purchase price, poor routing, and similar causes. If the price variation is based on correct standards, the natural conclusion is that such price variation is a gain or loss not related to product. Price variation is a measure of efficiency, and efficiency here consists of purchasing commodities or services in the most economical quantities and from the most economical sources for the quality desired, and proper routing of shipments. Efficiency is not affected by uncontrollable price fluctuations and such factors should not affect the amount of the variation. Since prices are largely beyond the control of management and since forecasting is extremely difficult and susceptible to error, price variations are likely to be less reliable measures of efficiency in practice than are

usage variations. This recognition of forecasting in relation to price standards deserves mention, though it must be stressed that current standard costs relegate price-forecasting to a minor role. A price standard cannot be set to last for a year unless the business contracts for purchases a year in advance. The contract base, though ideal, cannot be used in periods of hand-to-mouth buying; the remedy under such circumstances is prompt revision of price standards on the basis of current acquisition prices rather than forecasting. Prompt revision of price standards will eliminate the effect of uncontrollable fluctuations and leave a variation which is a true measure of purchasing efficiency.

On the basis of the theory presented above, it is logical to eliminate the price variation at the time of acquisition of the service or commodity: the entire variation loss pertaining to materials acquired in a period should be set up and charged off to profit and loss in that period in preference to the policy of leaving the amount which applies to the materials inventory as a portion of the asset. It is recognized that such procedure, together with other standard-cost procedures, would not be accepted by many public accountants and others for statement purposes. However, the resistance to standard-cost inventory valuation hinges upon the question of what is cost of product. This article has attempted to justify the elimination of the cost of waste and inefficiency from cost of product for all purposes.

CORPUS AND INCOME IN TRUST ACCOUNTING

Robert L. Rosbe

Uses and trusts originated in England shortly after the Norman Conquest. From that time to 1535 there exieted two classes of trusts in England, active and passive. Where A conveyed land to B for a period of years instructing B to apply the income of the land for the use of C an active trust was created. If A conveyed land to B who was to hold the land permanently for the benefit of C with no positive duties to be exercised by B a passive trust or use was created.

The latter type was far more common than the former. It was used principally to avoid some of the burdens which fell upon the holder of the legal title. Under the feudal system the lord was entitled to a "relief," or payment of money, when land descended to an heir of full age; and to "aids" upon the marriage of a daughter of the lord, the knighting of his eldest son, or when the lord was held for ransom. By conveying the legal title to another and reserving the use to himself the tenant escaped such exactions. Furthermore, legal title would be forfeited upon the commission of certain crimes; it was subject to rights of creditors, and the incidents of dower and curtesy. This was not so with respect to the equitable interest. The mortmain acts forbade the alienation of land to religious corporations, but by the conveyance of land to an individual to be held for the use of the religious order the monks and friars could have the benefit of the land.[1]

By the beginning of the sixteenth cen-

[1] Sec. 2 of Bogert, *Trusts and Trustees*.

tury uses and trusts had come to involve serious inconveniences as a result of which the Statute of Uses was enacted in 1535. Uses in land were thereby destroyed, because the law "executed the use," changing the equitable interest to a legal one. It was evident from the express words of the statute that it did not apply to uses in personal property nor to active trusts. The name "trust" was thereafter applied to all the equitable interests so sustained whether they had before been denominated uses or trusts. The English law on trusts was well developed when trusts came into more common use in America so the English system was adopted by the American colonial and early state chancellors.[2]

Under the general category of active trusts, there are express, implied, public, private, constructive, business and other trusts. The type with which this article is concerned is the express private trust, i.e., the trust created in express terms in a deed, writing or will wherein a beneficial interest is vested absolutely in one or more individuals who are or may be within a certain time definitely ascertained.[3] Such a trust arises when property, the trust *res*, is conferred by one person, the settlor, upon another person, the trustee, and accepted by the latter for the benefit of a third person, the beneficiary or *cestui que trust* for a certain or determinable period after which the property is to be transferred to a person known as the remainderman. It should be noted that one person may act in more than one of the foregoing capacities.

For accounting purposes the property conferred in trust becomes known as corpus, principal or capital as distinguished from income, the gain which proceeds from such property. The matter is comparable to a tree, the trunk and branches representing corpus, the fruit representing income. Many of the more difficult legal-accounting problems of trust administration arising in connection with this distinction have been litigated, but, because of the antiquity of the subject of trusts and the multifarious cases decided by numerous jurisdictions many questions adjudicated have resulted in variant conclusions; and not a few decisions have been reversed.

It is understood, of course, that the trust deed, writing or will may stipulate the treatment to be accorded certain items, in which case the trust instrument will usually control. Since it is difficult to foresee all possible contingencies, many questions arise for which no answer can be found in the trust instrument. The determination of what will be charged against or credited to corpus and what will be charged against or credited to income may be left to the discretion of the trustee. Even there, however, it is questionable to what extent a trustee can apply discretion, since the trustee must act in good faith and within the bounds of reasonableness.[4]

An attempt is here made to discuss the treatment of a few items of receipt and disbursement frequently omitted in the provisions of trust instruments. It should be remembered, however that despite the fact that all the statements made in this paper can be supported by legal authority, not all jurisdictions hold alike in similar circumstances. Furthermore, with changing social conditions, and changing personnel in courts and legislatures, the law of a particular jurisdiction may be quickly modified or completely revised.

One of the first problems to arise in the administration of a trust is that of allocating income a part of which might be said to have accrued prior to the inception

[2] Sec. 6 of Bogert, *Trusts and Trustees.*
[3] *Bouvier's Law Dictionary.*

[4] *Wright* v. *Blinn*, 225 Mass. 146; *Hanford* v. *Clancy*, 183 Atl. 271 (N.H. 1936).

of the trust. For example, if a settlor owned an interest bearing note and transferred such note to a trustee for a life tenant and remainder man at a time when there was interest accrued but unpaid, and subsequently an amount of interest was collected a portion of which represented the interest accrued at the date of the transfer of the note in trust, the amount received, subject to the terms of the trust instrument, should be allocated so that such accrued interest would be credited to corpus and only the portion earned subsequent to transfer would be credited to the trust income. Interest is regarded as accruing from day to day and not in a lump sum on the day when payment is due.[5] Similarly where certain income of the settlor has not been collected and the settlor transfers such chose in action to a trustee, the collection of such item by the latter is a realization of trust capital, not income.

While the foregoing results appear only logical, the answers to related questions are not necessarily the logical conclusions, to be derived from these premises. At common law sums due for rent, dividends, and annuities were treated as accruing on the due date or the date on which the item became a definite liability. Under such law, rent, dividends and annuities were treated as accruing respectively on the rent day, the day fixed by the directors in the declaration of a dividend, and the day fixed by the annuity contract. In the case of dividends such treatment may be supported by the argument that prior to the declaration of a dividend by the directors of a corporation, the stockholders have no clear claim for a share of the profits. In the case of rent or annuities, however, it is difficult to find justification for such treatment except the matter of increased computation which apportionment demands of the trustee.[6] To correct what appeared to be an injustice, statutes requiring apportionment in some or all cases have been enacted in Kentucky, Massachusetts, New York, North Carolina, Pennsylvania, Rhode Island, Virginia, West Virginia and England.

Similar doctrines apply in the case of the death of the life beneficiary between payment dates.

Where insured trust property is destroyed or otherwise lost to the trust, the proceeds of the insurance contract should be held as trust corpus even though the policy is for the benefit of both life tenant and remainderman.[7] The proceeds obviously constitute a replacement of trust capital and the life tenant will benefit by the receipt of income on such proceeds as invested. The remainderman will obtain it at the end of the life period.

It is, of course, elementary that unless definitely stated to the contrary in the trust instrument, a profit on the sale of trust property goes to the capital of the trust fund. Even if the settlor directs that all "profits" shall go to the life beneficiary, he will usually be deemed to have intended interest, rents, dividends and other income and not accretions in the nature of realized advancements in the price of the capital of the trust. This may be justified by the fact that a loss realized on the sale of an asset of the trust is borne by the trust capital and the gains and losses may therefore offset one another.

Where a corporation has accumulated its earnings over a period of time to such an extent that the market price has advanced by reason of such fact, it might be equitable, at least theoretically, to apportion a realized profit between corpus and income. A Pennsylvania case upheld such a point of view.[8] There are many cases,

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[5] *Bridgeport Trust Co.* v. *Marsh*, 87 Conn. 384.

[6] *Trusts and Trustees*, Bogert, sec. 816.

[7] *Horton* v. *Upham*, 72 Conn. 29.

[8] In re Nirdlinger's Estate, 290 Pa. 457.

however, in the same and other jurisdictions which deny the validity of such treatment. The Circuit Court of Appeals, seventh circuit, held that the entire proceeds received by a trustee from the sale of capital stock were corpus following the rule on stock dividends.[9]

Although it may be difficult for everyone to agree as to the exact definition of an ordinary cash dividend,[10] those dividends, which most people would probably call ordinary cash dividends, paid to a trustee during a life tenancy, are income for the life tenant regardless of the source of the dividend and the jurisdiction in which the trust may be said to be domiciled because even in states following the Pennsylvania rule[11] one or more of the following will prevent apportionment:

1. Ordinary dividends are normally declared out of current income.
2. In many cases the amount of dividends is too small to warrant a burdensome investigation.
3. The common law disfavored apportionment on the death of the settlor or life tenant.

In the case of extraordinary cash dividends, stock dividends, stock subscription rights and liquidating dividends there are various results. The rules with respect to the allocation of extraordinary dividends have been expounded by jurists and writers for many years: There are three main rules, the Massachusetts, Pennsylvania, and Kentucky.[12] Generally one of these rules will apply, but under unusual circumstances exceptions will occur as evidenced by cases where capital stock of a company other than that of the declaring corporation is distributed to its stockholders one of whom is a trustee. It has been held that if the corporate resolution indicates that such distribution is being made from "surplus assets" or from "last accumulated earnings" such dividend would inure to the life beneficiaries even though the Massachusetts rule had been generally followed by the jurisdiction.[13] The Illinois court has gone so far as to hold that 77.96% of a liquidating dividend went to income where 77.96% of the original capitalization of the liquidating company was traceable to earned surpluses of a bank in which the trust had held stock at the time the liquidating company began business.[14] It is evident that in some cases the court will look to the substance rather than the mere form.

Where a trustee had an option to take either cash or stock the Massachusetts Supreme Court has held such to be a cash

[9] *Long* v. *Rike*, 50 Fed. (2d) 124.

[10] Sec. 844 Bogert, *Trusts and Trustees*.

[11] *Infra*.

[12] The Massachusetts rule is the most simple and has been adopted by decision or by statute by a plurality of jurisdictions among those which have considered the question. (U. S. Supreme Court, Connecticut, Georgia, Illinois, Maine, Missouri, North Carolina, Ohio, Virginia, West Virginia and New York since 1926.) The English courts appear to hold in agreement with the Massachusetts rule (Re Northage 60 L. J. Ch. 488; Re Alsbury 45 Ch. D. 237; *Boucher* v. *Sproule*, 12 App. Cas. 385; Re Evans 1 Ch. 23). This rule has also been incorporated in the Uniform Principal and Income Act by the National Conference of Commissions on Uniform State Laws set out in part below:

"All dividends on shares of a corporation forming part of the principal which are payable in the shares of the corporation shall be deemed principal. Subject to the provisions of this section, all dividends payable otherwise than in the shares of the corporation itself, including ordinary and extraordinary dividends and dividends payable in shares or other securities or obligations of corporations other than the declaring corporation shall be deemed income. Where the trustee shall have the option of receiving a dividend either in cash or in the shares of the declaring corporation, it shall be considered as a cash dividend and deemed income, irrespective of the choice made by the trustee."

The Pennsylvania rule or American rule requires an apportionment between principal and income of an extraordinary dividend regardless of the medium of payment on the theory that the life tenant is entitled only to earnings distributed during his tenancy and which accrued to the corporation during the same period. This rule is followed in California, Iowa, Maryland, Minnesota, Mississippi, New Hampshire, New Jersey, South Carolina, Tennessee, Vermont and Wisconsin and was followed in New York from 1913 to 1926.

The Kentucky rule calls for the allocation of all dividends to income regardless of the form or source thereof.

[13] *Gray* v. *Hemenway*, 168 N.E. 102 (Mass.); *Lloyd* v. *Lloyd*, 341 Ill. 461.

[14] *Whiting* v. *Hagey*, 7 N.E. (2d) 885. See Mr. H. D. Greeley's comments in LXIV, *J. of Accy.*, 148.

dividend.[15] The Pennsylvania rule has been applied to extraordinary cash dividends when they were coupled with options to buy stock at less than market price thereby treating the dividends as extraordinary cash dividends.[16]

In the case of liquidating dividends the courts of Illinois, Indiana, Iowa, New Jersey, Pennsylvania and Wisconsin have applied the whole amount received by the trustee to trust capital, disregarding the fact that the corporation may have had a surplus in which accumulated earnings had been placed.[17] Apportionment of such dividends has been required in cases decided in New Hampshire, New York, and South Carolina.[18]

The approved treatment of premiums and discounts on bonds purchased by a trustee is not logical in all cases. With respect to premiums, the more recent cases require that the trustee set up a sinking fund out of the proceeds from coupons in order to maintain the trust capital intact.[19] A few earlier decisions, the statutes of Oregon and Hawaii and the Uniform Capital and Income Act allocate the loss from premiums on capital and require no amortization.[20]

In view of the fact that in most cases amortization of premiums is required, it would seem logical that discounts be accumulated. An early New York decision[21] refused to give any of the discount realized on the sale of bonds to the life cestui. This view has been approved by dicta in later cases in New York and other states. Courts in California and Delaware have also held that discount when realized by the sale or collection of a bond goes entirely to trust capital.[22] The statutes of Oregon and Hawaii and the Uniform Principal and Income Act provide that gain realized with respect to discount inures to the benefit of trust capital.

In the case of bonds purchased by the settlor and made a part of the trust *res* no amortization or accumulation is required on either premium or discount even though priced at a premium or discount at the inception of the trust.[23] The settlor is deemed to have intended that the life cestui should have the full amount of the proceeds from coupons on bonds transferred but no more than such proceeds.

If trust funds are invested in notes secured by mortgages on real estate and default occurs in the payment of principal or interest various problems arise depending on the procedure followed by the trustee. If the trustee institutes foreclosure proceedings and buys the property at the foreclosure sale, ordinarily no cash is received by the trustee unless there is an excess of rents over operating expenses. Any excess of expenses, fees, etc., over rents should be paid from trust capital. When the property is subsequently sold, the trust capital should be reimbursed for any advances and the balance of the proceeds divided, if possible, to give the life cestui the accrued income due, and to give trust capital the amount of the cost or basis of the original notes. Any excess would go to trust capital.

Usually the proceeds after reimbursement of trust capital for advances would

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[15] *Davis* v. *Jackson*, 152 Mass. 58.

[16] *Ballentine* v. *Young*, 79 N.J. E. of 70; in re Thompson's Estate, 262 Pa. 278.

[17] *Blinn* v. *Gillett*, 208 Ill. 473; in re Etzel's Estate, 211 Iowa 700; *McCoy* v. *McCloskey*, 94 N.J. E. 960; in re Estate of Gerlach, 177 Wis. 251; *Powell* v. *Madison Safe Dep. & Tr. Co.*, 208 Ind., 432; Oppermason's Estate, 319 Pa. 455.

[18] *Lord* v. *Brooks*, 52 N.H. 72; in re Moore's Estate,

[19] In re estate of Gartenlaub, 185 Cal. 648; *Curtis* v. *Osborn*, 79 Conn. 555; *New England Tr. Co.* v. *Eaton*, 140 Mass. 532; Matter of Stevens, 187 N.Y. 471, in re Estate of Wells, 156 Wis. 294.

[20] Oregon L. 1931, c. 371 sec. 6; Hawaii L. 1927, Act 187; sec. 6 of Uniform Capital and Income Act.

[21] *Townsend* v. *U. S. Trust Co.*, 3 Redf. Sur. 220.

[22] In re Gartenlaub's Estate, *supra;* in re Houston's Will, 19 Del. Ch. 207.

[23] Conn. Tr. & Safe Dep. Co's. Appeal 80 Conn. 540; *Robertson* v. *De Brulatour*, 188 N.Y. 301; *Ballentine* v. *Young*, 74 N.J. Eq. 572; *McLouth* v. *Hunt*, 154 N.Y. 179.

not be sufficient to cover both defaulted interest and principal. In such cases an apportionment should be made, but courts are not in accord as to the method of apportionment. Some authorities hold that of the amount realized, so much is principal which will together with accrued interest thereon, equal the amount realized.[24] Others apportion the loss between principal and income in the ratio which the aggregate principal of the investment bears to the whole interest unpaid at the time when the security is realized upon and the amount of the loss determined.[25] It is said that "apportionment should be made in all such cases for the fundamental reason that in nearly all instances of long continuing trusts the life tenants are primary objects of the bounty of testators and their incomes should be preserved to them, so far as it is possible to do so, even though it may result in ultimate diminishment of principal to be paid to far off remaindermen. Life tenants should not be required to starve in order that the remainderman may ultimately feast."[26]

The New York court has held that where a bond and mortgage are upon default surrendered in exchange for bonds of the Home Owners Loan Corporation, the proceeds of the sale of such bonds should be apportioned in proportion to the amount of income and capital due on the original so-called mortgage.[27] In the same case the court went on to say that where a bond and mortgage are surrendered for part cash and part Home Owners Loan Corporation bonds, no apportionment should be made until all the new property received is turned into cash. Although it is reported that no additional bonds are being presently issued, the example serves to demonstrate that a court would probably view any property received by a trustee-mortgagee in the same light as the real estate acquired by foreclosure proceedings even though acquired by settlement, i.e., providing for an apportionment between trust capital and income only upon the realization of cash on the property acquired, whether such property was real or personal.

On items of trust disbursements the trustee is ordinarily called upon to decide what expenditures shall be paid out of corpus and what shall be paid out of income. A Utopian trust instrument would stipulate what to do in every case, but normally the guide of an ordinary trustee must be legal precedent.

The Massachusetts court has said,[28] "The regular, annual or periodically recurring expenses arising in the administration of a productive trust commonly are paid out of the income, while extraordinary and unusual expenses are chargeable against the capital."

If a settlor, in the case of a mortgage, makes no special provision about the payment he is deemed to have intended that the life tenant bear the interest charges and the remainderman the principal due on the mortgage. The trustee should, therefore, meet interest payments out of current trust income and payment of the principal of the mortgage debt from the capital of the trust.

In some instances settlors have charged the payment of an annuity in favor of a third person upon a trust fund which is to be held for a life beneficiary and a remainderman. English cases have apportioned annuity payments between income and capital of a trust, in proportion to the values of their respective interests either at the time of payment or at the time the annuity began. As stated by Professor

[24] *Greene* v. *Greene*, 19 R.I. 619; Nirdlinger's Estate, 327 Pa. 171; American Law Institute Restatement of the Law; Trusts, sec. 241.

[25] In re Chapel's Will, 269 N.Y. 464; *Parsons* v. *Winslow*, 16 Mass. 361; also followed in English cases; re Atkinson 2 Ch. 160; re Moore 54 L.J. Ch. 432.

[26] Nirdlinger's Estate, *supra*.

[27] In re Pelcyger's Estate, 285 N.Y.S. 723.

[28] *Cogswell* v. *Weston*, 228 Mass. 219.

George G. Bogert,[29] "If there is a sale or mortgage of the trust property to meet the annuity charged on the trust property, the expense will thereby be apportioned in that the life beneficiary will lose the income from the property sold or will have to pay interest on the mortgage."

If a leasehold constitutes a part of the trust *res* the obligations to pay rent, to repair and to insure are satisfied out of income and a trustee may properly hold back income to create a fund to meet contingent future liabilities on the lease.[30] If the life beneficiary is in possession he must meet these obligations. Expenses for repairs of a minor nature should be borne by trust income on the theory that the settlor intended the beneficiary to maintain the productivity and integrity of the capital assets as of the date of the creation of the trust. But repairs may be so important and costly that a court may be justified in ordering their payment from capital. Such repairs are similar to improvements inasmuch as they add value to the corpus which will be turned over to the remainderman. Improvements are, of course, charged to corpus. Even so, both the life tenant and the remainderman may be said to contribute since less income will be earned by reason of the reduced size of remaining trust capital. Offsetting this may be the possibility of increased income or benefits to the life tenant from the improved property.

"Unless it is otherwise provided by the terms of the trust, if property held in trust to pay the income to a beneficiary for a designated period and thereafter to pay the principal to another beneficiary is wasting property, the trustee is under a duty to the beneficiary who is entitled to the principal, either to make provision for amortization or to sell such property."[31]

[29] *Trusts and Trustees*, Bogert, sec. 802.
[30] In re Parr, 92 N.Y.S. 990.
[31] Sec. 239 of Restatement of the Law, Trusts.

Wasting property consists of interests which terminate or necessarily depreciate in course of time either because of the nature of the interest or because of the character of the subject matter of the interest. There may be an express or implied intention on the part of the settlor, however, that the whole of the receipts from wasting assets be paid to the life beneficiary. This is a question of interpretation of the facts in each case.

General property taxes are usually paid out of trust income since they are regarded as a part of the maintenance of the integrity of the fund.[32] They have been said to be the price of governmental protection and the various services necessary to keep the trust property secure and productive. Ordinarily the trustee may take income from any trust property to pay taxes on trust capital and the life tenant cannot prevent such by showing that the taxed property produced inadequate income. In some cases, however, where the trust property was unproductive, the court has held that taxes should be paid from trust capital.

Taxes which became liens prior to the beginning of the trust should be met out of trust capital.

No cases are reported covering Federal income taxes on capital gains of a trust in which such gains are not distributable. It seems, however, that it would be equitable to charge such an item to trust capital.

Other disbursements to be charged against capital include calls or assessments on capital stock owned by the trust, the cost of removing an incumbrance on trust property (in ex., a claim for dower) and litigation costs incurred in enforcing or defending the trust. The cost of an intermediate or final accounting and commissions or other compensation paid to the

[32] *Hagen* v. *Varney*, 147 Ill. 281.

trustee may be shared by the two classes of beneficiaries but the matter is one for the discretion of the court and the allocation will therefore depend upon the circumstances of each case.

The extent of an accountant's responsibility for the disclosure of misfeasance or malfeasance in the administration of a trust is questionable. It is probably beyond the province of the accountant to consider all the duties and powers of the trustee, but, since all people are presumed to know the law, the accountant would probably be required to note in his report any act of a trustee which the accountant knew or should have known through his examination. For example, if a trustee were not making distributions of trust income in accordance with the terms of the trust indenture, or if a trustee were investing trust funds in unauthorized nonlegal investments, or if a trustee in his or its individual capacity were buying from or selling to the trustee in his or its fiduciary capacity—any such matter seems to demand comment just as surely as it is necessary to report misappropriation of funds in a balance-sheet audit of a corporation. In view of the fiduciary relationship and frequently the dependency of beneficiaries upon the trust it appears even more imperative that the administration of assets by the trustee be impeccable.

For the accountant who seeks a rule to follow in relation to certain situations the number of contradictory decisions is disturbing. Furthermore, it is not always convenient to secure unbiased legal opinions on trust questions since few accountants are lawyers and a trustee's counsel is usually the one who suggested the procedure followed and is therefore an interested party. Retaining of independent counsel for such questions is usually not financially expedient. However, it is desirable for the accountant to make full disclosure of any questionable entries or acts by commenting in his report on the treatment accorded the matter by the trustee.

ACCOUNTING FOR INVESTMENTS IN LIFE INSURANCE

W. H. Whitney

Recently a number of texts and reference books on accounting were examined for the purpose of learning the correct method of computing the value of a nonparticipating life-insurance policy, for presentation on the balance sheet of a going concern. Most of the books examined omitted all mention of the subject. In the five books that mentioned it, four different methods were recommended. In the case which the author had under consideration, the four methods produced four different answers. The variation between the high and low answers was substantial. A fifth method was described, but was not recommended, and will receive no consideration here.

A study of the four recommended methods convinced the author of this paper that the variations were not due to differences of opinion on the relative merits of the various methods, but to several causes. One is that accuracy has not been earnestly sought. The proper valuation of life-insurance policies owned is relatively unimportant, because the asset value is not large, and a misstatement does not seriously distort the balance

sheet. Another cause is that a life-insurance policy is a unique combination of investment and expense. Accounting principles applicable to investments and accounting principles applicable to expense are alike involved in determining the asset value. The accounting principles used in valuing nonparticipating policies are universally accepted, but they conflict, because the policy contains expense and investment elements. If proper limitations are imposed on the operation of the accounting principles involved, there is no conflict, but these limitations are a little difficult to understand.

If the author's conclusion is correct, that is, if there is no sound basis for differences of opinion on this subject, a small contribution to accounting practices might be made by pointing out the common fallacies, and by making this information available to authors of future texts and reference books. That is the primary purpose of this paper.

A study of nonparticipating policies inevitably led to a consideration of participating policies. There was very little text material available on the subject of accounting for dividends. The proper method of taking dividends into the accounts is debatable, because they are contingent in theory and by the terms of the contract, but as certain as the best accounts receivable in practice. Some accountants will be swayed most by legal considerations, and others by practical. The author is in the latter group. At the conclusion of the material relating to nonparticipating policies, suggestions will be offered on the proper method of taking dividends into the accounts.

A sample policy furnished by one insurer[1] is used for illustrative purposes; the necessary details are:

Date of policy	September 30, 1933
Amount of insurance	$30,000.00
Annual premium	1,351.50
Cash values stated in the policy	
End of the second year, September 30, 1935	1,050.00
End of the third year, September 30, 1936	2,130.00
End of the fourth year, September 30, 1937	3,090.00
End of the fifth year, September 30, 1938	4,050.00
End of the sixth year, September 30, 1939	5,070.00

This is a participating policy, but it will be used as an example of the accounting treatment to be accorded nonparticipating policies in illustrations #1 to #8, and as an example of the accounting treatment to be accorded participating policies in illustrations #9 and #10.

It is the author's impression that many accountants look for the table of cash or loan values in a life-insurance policy, select the last value which precedes the balance-sheet date, and adjust the accounts to this amount.[2] If that practice is followed in the example that we are considering, the policy will appear on a balance sheet dated December 31, 1938, as shown on the following page.

Colonel Robert H. Montgomery has called attention to the error in this procedure.[3] The cash value shown in a nonparticipating policy is the amount that can be realized on the anniversary before the payment of the premium for the ensuing year. After an annual premium has

[1] The Union Central Life Insurance Company, Cincinnati, Ohio. Twenty payment life, age 45, 1938 rates. The author desires to extend his thanks to The Union Central Life Insurance Company for furnishing him with this sample policy and other helpful information.

[2] This is the practice followed by Paul E. Bacas, C.P.A., in his *Auditing Practice Set*, third revised edition, Ronald Press, N.Y. See *Instructor's Guide*, p. 41, and *Information Set*, p. 17. Mr. Bacas suggests confirmation with the insurance company and assumes that the reply confirms this value. If the letter to the insurance company merely requests confirmation of the values printed in the policy, the correct reply in the example under consideration is $4,050.00. If the letter requests the insurance company to compute the value on December 31, 1938, the correct reply in the example under consideration is $4,879.87. This has been confirmed by direct conversation with the loan officer of The Union Central Life Insurance Company.

[3] *Auditing Theory and Practice*, R. H. Montgomery, Ronald Press, fifth edition, p. 243.

ILLUSTRATION 1

A COMMON METHOD OF PRESENTING THE CASH VALUE OF A LIFE-INSURANCE POLICY ON THE BALANCE SHEET OF THE OWNER

Cash value of life-insurance policy	$4,050.00

been paid, the insured is entitled to the cash value at the end of the policy year less discount at the rate specified in the policy. In the example that we are using, this value is substantially larger than the amount shown above.

The following facts may be cited in support of this illustration. On December 31, 1938, the owner of the policy could realize $4,879.87 in cash, and allow the policy to remain in force with premiums fully paid to September 30, 1939. Unquestionably, this prepaid insurance has a value, which should appear on the balance sheet in addition to the cash value.

ILLUSTRATION 2

CORRECT COMPUTATION OF THE CASH VALUE OF THE SAME POLICY ON THE SAME DATE, DECEMBER 31, 1938.

Cash value stated in the policy for the end of the sixth year, September 30, 1939	$5,070.00
Discount at the rate specified in the policy, 5%, for nine months, from December 31, 1938 to September 30, 1939	190.13
Actual cash value of this policy on December 31, 1938	$4,879.37

The treatment recommended in the Accountants' Handbook seems logical and final, but it is faulty. Interest has been taken into account in computing the cash value, but it has not been taken into account in computing the prepaid expense. Therefore, the prepaid-expense item of $248.63 has not been correctly computed.

In fact, as well as in theory, the cost of insurance for the policy year ending September 30, 1939, is more than the $331.50 computed in illustration 3. The interest earned on the investment that the

A further development of this subject will be found in the Accountants' Handbook.[4] There the reader's attention is directed to the same method of computing cash values as is recommended by Colonel Montgomery, and an additional step is recommended. The author of the article in the handbook suggests that the increase in the cash value be deducted from the net premium paid, and that the difference be prorated over the year as prepaid insurance expense. The application of this suggestion to the example that we are considering is as follows.

ILLUSTRATION 3

DEMONSTRATION OF THE RECOMMENDATIONS IN THE ACCOUNTANTS' HANDBOOK

Premium for the sixth year		$1,351.50
Cash value, September 30, 1939	$5,070.00	
Cash value, September 30, 1938	4,050.00	
Increase in cash value during the current policy year		1,020.00
Prepaid life-insurance expense, September 30, 1938, to be prorated over the twelve months following this date		$ 331.50
Prepaid life-insurance expense, December 31, 1938, three-fourths of $331.50		$ 248.63

DISPLAY ON A BALANCE SHEET DATED DECEMBER 31, 1938

Cash value of life-insurance policy	$4,879.87
Prepaid life insurance expense	248.63

[4] *Accountants' Handbook*, W. A. Paton, Ronald Press, second edition, p. 1499.

policyholder has placed with the insurance company is actually used to make up the difference between $331.50 and the actual cost of the insurance. The prepaid-expense item on December 31, 1938 is the sum of the $331.50, computed in illustration 3, and the discount, $190.13, computed in illustration 2.

The inconsistency in the treatment recommended by the Accountants' Handbook can be demonstrated by assuming that the policyholder is a corporation publishing quarterly statements, and by tracing the effect of the recommended computations to the operating statements.

The inconsistency in the operating accounts resulting from this treatment is evident. If the policyholder publishes monthly statements it is accentuated. The expense for the first month is $260.00, and the expense for each of the eleven succeeding months is $6.50.

If the discount is added to the prepaid insurance computations shown above, the insurance expense for the year will be distributed equally by quarters or by months.

At first glance it is difficult to understand how there can be $438.75 of prepaid insurance premiums on December 31,

ILLUSTRATION 4

THE EFFECT OF THE ACCOUNTING METHODS RECOMMENDED IN THE ACCOUNTANTS' HANDBOOK ON THE OPERATING ACCOUNTS OF THE POLICYHOLDER

Balance Sheet published September 30, 1938.	
Assuming that the premium due on that date is paid during the following month, within the thirty-one day grace period, this balance sheet would include the policy at the value stated in it for the end of the fifth year	$4,050.00
The charge to operations for the next three months can be computed by adding to this amount the premium paid	1,351.50
Sum	$5,401.50
And by subtracting the sum of the values shown in illustration 3, $4,879.87 plus $248.63	5,128.50
Net charge to operations for the last three months of 1938	$ 273.00
The charge to operations for each of the remaining quarters can be computed by deducting $273.00 from $331.50, the total insurance expense for the year and dividing the difference, $58.50, by three	$ 19.50
The computation of this $19.50 can be further verified by computing the balance-sheet values of the policy on March 31, 1939 and subtracting the sum of these values from the sum of the corresponding values on December 31, 1938. The computation follows.	
Cash value stated in the policy for the end of the sixth year, September 30, 1939	$5,070.00
Discount at five per cent for six months	126.75
Cash value on March 31, 1939	$4,943.25
Prepaid expense, one-half of $331.50 (Illustration 3)	165.75
Sum of these values on the balance sheet of March 31, 1939	$5,109.00
Sum of the corresponding values on balance sheet of December 31, 1939, computed above in this illustration	5,128.50
Net charge to operations for the first three months of 1939	$ 19.50
The computation of this $19.50 can be further verified by deducting the discount for three months, $63.38, from the expired insurance premiums for three months, computed as shown in illustration 3, one-fourth of $331.50, $82.88	$ 19.50
Summary of charges to operations obtained by following the accounting methods recommended in the Accountants' Handbook	
Charge to operations for the quarter ended December 31, 1938	$ 273.00
Charge to operations for the quarter ended March 31, 1939	19.50
Charge to operations for the quarter ended June 30, 1939	19.50
Charge to operations for the quarter ended September 30, 1939	19.50
Charge to operations for the year ended September 30, 1939	$ 331.50

Illustration 5

The Effect of Including Interest in the Computations of Prepaid Life-Insurance Values

Cash value on December 31, 1938 as computed in illustration 2		$4,879.87
Prepaid insurance premium on December 31, 1938 as computed in illustration 3	$248.63	
Discount, from illustration 2	190.13	
Prepaid insurance on December 31, 1938, including interest		438.76
The sum of these two balance-sheet values on December 31, 1938 is		$5,318.63[6]
Charge to operations for the last quarter of 1938 is computed by deducting this amount from $5,401.50 (Illustration 4)		5,401.50
Charge to operations for the last quarter of 1938 is one-fourth of $331.50, insurance expense for the year		$ 82.87
The sum of the same two balance-sheet values on March 31, 1939 will exceed the amount shown in Illustration 4		$5,109.00
By the discount at five per cent for six months		126.75
Balance-sheet value of policy on March 31, 1938 if interest is taken into account in computing prepaid insurance premiums		$5,235.75
Corresponding value on December 31, 1938		5,318.63
Charge to operations for the first quarter of 1939		$ 82.88
Summary of charges to operations obtained by taking interest into account in computing cash values and prepaid insurance premiums.		
Charge to operations for the quarter ended December 31, 1938		$ 82.87
Charge to operations for the quarter ended March 31, 1939		82.88
Charge to operations for the quarter ended June 30, 1939		82.87
Charge to operations for the quarter ended September 30, 1939		82.88
Charge to operations for the year ended September 30, 1939		$ 331.50

1938, when the total insurance expense for the year is only $331.50. The reconciling factor is interest, which is used to reduce insurance expense, instead of being credited to an interest income account. Actually, the insurance expense for the entire year is $585.00, but it appears to be $331.50, because interest earned totalling $253.50 is applied to reduce insurance expense, instead of being recorded as income. $253.50 is the discount for one year at five per cent on $5,070.00, the cash value at the end of the sixth year.

The next question to be considered is one of expediency. Is the correct valuation of life insurance policies important enough to warrant a number of long and involved computations, with attendant chances of error, when a practicing accountant is working under pressure, and has his mind and time occupied with things of much greater significance?

The answer is, that the long and involved computations have been used in this paper to point out the differences between the four methods recommended. In practice, the computations required are very simple, almost as simple as the computation of the balance-sheet value of a fire-insurance policy. The method is essentially the same, with the substitution of the cash value at the end of the current policy year, for the expiration date of the fire-insurance policy.

Fire-insurance policies have cash values which can be obtained by surrendering the policy. These cash values are ignored in accounting for fire-insurance costs because the policy has a definite expiration date. The life-insurance policy, used as an example for this paper, has no expiration date. It does have stated cash values on stated dates. Therefore, these values and

[6] This checks with the value recommended by H. A. Finney in his *Principles of Accounting*, Vol. II, Prentice-Hall, 1934 edition, p. 115.

dates form convenient substitutes for the expiration dates of fire-insurance policies.

The basic assumption underlying the accounting for fire-insurance policies is that the policy is worth its cost on the date of issue. If that assumption is applied to the example, on September 30, 1938, after the payment of the premium for the ensuing year, the policy was worth $5,401.50, the sum of the cash value and the premium paid, as computed at the beginning of illustration 4. On September 30, 1939, before the payment of the next premium, the policy will be worth $5,070.00. On any intervening date the value can be computed by prorating the difference and subtracting the expired portion from $5,401.50.

The value thus computed contains two elements, a cash value and a prepaid-expense value. If either is correctly computed and subtracted, the difference represents the other.

#3. In addition to 2, subtract the increase in cash value from the premium paid, and set up a prepaid expense item by prorating this difference.

#4. Add the last premium paid to the last cash value shown. From this amount subtract the expired premium computed as explained in method 3. From the difference subtract the cash value, computed by method 2. The second difference is the prepaid expense.

Record-keeping, in connection with this policy, will be reduced to a minimum, if a single account is carried for the balance sheet value of the policy. For such an account, I suggest the name of, "Book Value of Life-Insurance Policy." To open such an account, I suggest that it be charged with the cash value on the last anniversary and the premium paid for the ensuing year. It should then be credited with the expired premiums monthly, quarterly, or annually, as the management prefers. The offsetting charge would be to

Illustration 6

A Simple Method of Computing Correct Balance Sheet Values for the Policy Used as an Example, as of December 31, 1938

Value of the policy on September 30, 1938 after the payment of the premium due on that date (Illustration 4)	$5,401.50
Prorated portion of the decline in value for the ensuing twelve months, one-fourth of $331.50	82.88
Value of the policy on December 31, 1938	$5,318.62
Cash value on the same date (Illustration 2)	4,879.87
Prepaid life-insurance premiums on December 31, 1938	$ 438.75

Life-Insurance Expense. When a balance sheet is prepared, if it is desirable to separate Cash Value from Prepaid Life-Insurance Expense, it is only necessary to compute the cash value, show it as a separate item, deduct it from the balance of the account, and show the difference as Prepaid Life-Insurance Expense.

Is it necessary or desirable to show these two items separately on the balance sheet? It is customary to show the cash value as a separate item. It is the only immediate balance sheet value in connection with life insurance that most business men,

A comparison of these values with those shown in illustration 5 will reveal the identity of the results obtained by the two methods of computation.

Illustration 7, which follows, is submitted for the purpose of clarifying and comparing the results obtained by using the four methods. For purposes of review the four methods are as follows:

#1. Inspect the policy and take the cash value shown for the last anniversary.

#2. Compute the cash value by deducting discount at the rate shown in the policy from the cash value shown for the next anniversary.

Illustration 7

A Detailed Comparison of the Four Methods of Computing Balance-Sheet Values of Life-Insurance Policies, and Their Effects on Operations if Quarterly Balance Sheets are Published

	Method 1	*Method 2*	*Method 3*	*Method 4*
Value of policy, September 30, 1938, before payment of premium. Cash value only	$4,050.00	$4,050.00	$4,050.00	$4,050.00
Value of policy, September 30, 1938, after payment of premium. Cash value	$4,050.00	$4,816.50	$4,816.50	$4,816.50
Prepaid expense value	—	—	331.50	585.00
Total	$4,050.00	$4,816.50	$5,148.00	$5,401.50
Resulting charge to operations on September 30, 1938. $5,104.50 minus the total immediately above	$1,351.50Dr.	$ 585.00Dr.	$ 253.50Dr.	$ —
Value of policy December 31, 1938				
Cash value	$4,050.00	$4,879.87	$4,879.87	$4,879.87
Prepaid expense value	—	—	248.63	438.75
Total	$4,050.00	$4,879.87	$5,128.50	$5,318.62
Charge or credit to operations, October to December, 1938	$ —	$ 63.37Cr.	$ 19.50Dr.	$ 82.88Dr.
Value of policy March 31, 1939				
Cash value	$4,050.00	$4,943.25	$4,943.25	$4,943.25
Prepaid expense value	—	—	165.75	292.50
Total	$4,050.00	$4,943.25	$5,109.00	$5,235.75
Charge or credit to operations, first quarter, 1939	$ —	$ 63.38Cr.	$ 19.50Dr.	$ 82.87Dr.
Value of policy June 30, 1939				
Cash value	$4,050.00	$5,006.62	$5,006.62	$5,006.62
Prepaid expense value	—	—	82.88	146.25
Total	$4,050.00	$5,006.62	$5,089.50	$5,152.87
Charge or credit to operations, second quarter 1939	$ —	$ 63.37Cr.	$ 19.50Dr.	$ 82.88Dr.
Value of policy, September 30, 1939, before payment of premium. Cash value only	$5,070.00	$5,070.00	$5,070.00	$5,070.00
Charge or credit to operations, third quarter, 1939	$1,020.00Cr.	$ 63.38Cr.	$ 19.50Dr.	$ 82.87Dr.
Summary of Charges and Credits to Operations				
September 30, 1938	$1,351.50Dr.	$ 585.00Dr.	$ 253.50Dr.	$ —
October to December, 1938	—	63.37Cr.	19.50Dr.	82.88Dr.
Total for the last quarter of 1938	$1,351.50Dr.	$ 521.63Dr.	$ 273.00Dr.	$ 82.88Dr.
First quarter, 1939	—	63.38Cr.	19.50Dr.	82.87Dr.
Second quarter, 1939	—	63.37Cr.	19.50Dr.	82.88Dr.
Third quarter, 1939	1,020.00Cr.	63.38Dr.	19.50Dr.	82.87Dr.
Net total for the year ended September 30, 1939	$ 331.50Dr.	$ 331.50Dr.	$ 331.50Dr.	$ 331.50Dr.

bankers, and accountants fully understand. This is reason enough for showing it separately, in most instances.

The author of this paper is interested in probing the question more carefully, and in determining whether there are reasons other than custom and expediency. As has already been pointed out, a life-insurance policy involves investment and expense elements. Another example of balance-sheet items that contain these two elements is bonds purchased at a premium and held as a long-term investment. Insurance companies and other

financial institutions own millions of dollars worth of them. They have a market value, a face value which is receivable at a future date, and an unamortized premium, which will be charged against income after the balance-sheet date. The holders of such bonds usually do not separate the deferred charge against operations from the face value or market value on the balance sheet. Usually, a notation of the market value will be found somewhere on the balance sheet and in some instances, the face value. Many examples could be cited where the sums involved in investments of this character are so large that the cash values of life-insurance policies pale into insignificance by comparison.

If it is unnecessary to separate deferred charges from market values or face values in the case of investments that, frequently, total many millions of dollars, why should such a separation be essential in the case of the cash value of life-insurance policies, which, in all instances, are measured in thousands or hundreds of dollars? The author of this paper can see no reason, except custom and expediency. Assuming that the corporation owning the policy, that has been used as an example, is not beholden to bankers, why not list the insurance policy on the balance sheet of December 31, 1938, in the following manner.

ILLUSTRATION 8

SUGGESTED FORM FOR LISTING A LIFE-INSURANCE POLICY ON A BALANCE SHEET

Book value of life-insurance policy (Cash value—$4,879.87) $5,318.62

A large majority of the ordinary, limited-payment-life, and endowment-policy contracts are participating. At the end of every policy year every policyholder receives a credit for the amount of his dividend with his premium notice. In the example we are using, let us assume that the dividend at the end of the fifth year is $135.15, and that the policyholder deducts this from the amount of the premium payable by the terms of his policy, and mails a check to the insurance company for the difference, known as the net premium, $1,216.35.

If the policyholder has an account with "Book Value of Life Insurance Policy" which is adjusted to the cash value stated in the policy, $4,050.00, the obvious method of handling this situation is to charge the "Book Value" account for the amount paid, $1,216.35, compute the new balance, $5,266.35, deduct the cash value stated in the policy for the end of the policy year, $5,070.00, obtain the difference, $196.35, and consider it the amount of insurance expense to amortized during the ensuing policy year.[6] If the accounting is handled in this manner, and if the book value for December 31, 1938 is computed according to the method recommended in illustration 6, it will amount to $5,217.26. This amount is obtained by subtracting one-fourth of $196.35 from $5,266.35.

As a matter of fact, a participating policy is more valuable than a nonparticipating policy written on the same terms, because the participating policy gives the policyholder everything that the nonparticipating policy does, and annual dividends in addition. On any anniversary the participating policy has a greater cash value, because the policyholder can realize a dividend in addition to the cash value stated in the policy.

The computation which we have made does not indicate this additional value. Instead, the value computed is $101.36 less than it would have been if the policy was nonparticipating.

[6] In the *Accountants' Handbook* (fn. 4) and *Principles of Accounting* (fn. 5), p. 114, both authors recommend that dividends be used in the accounts to reduce the cost of insurance for the year following the receipt of the dividend.

In order to account properly for dividends it is necessary to understand their nature. Life-insurance companies make contracts which must be enforceable many years after their original date. Over long periods of time, important changes in the cost of insurance can occur, and have occurred. To provide for unforseeable increases in the cost of insurance, most insurance companies have made contracts which obligate the policyholders to pay more for the insurance than it is conceivable that it will cost. The contract also obligates the insurance company to return to the policyholders the excess above cost, and a reasonable provision for contingencies, at the end of each policy year, when such costs have been ascertained. Violent changes in the cost of insurance from year to year in a large and properly managed company are rare. As a rule, dividends increase slightly on individual policies, because the surplus interest earning applicable to each policy increases as the cash value increases.

In determining the proper method of accounting for dividends the following facts should receive consideration.

1. On an anniversary date the cash value of a participating policy exceeds the cash value stated in the policy by the amount of the dividend.
2. Dividends used to reduce premium have no effect on the cash value on any other date.
3. The payment of a dividend by a strong, well-managed, participating company is as certain, a year in advance, as the collection of the highest grade of accounts receivable, or bonds.
4. Legally, the payment is contingent.
5. A year in advance, the amount of the dividend is not as certain as the fact that a dividend will be paid. Frequently, dividend rates are changed.
6. Usually, the changes in rates are small. Rates can be reduced to some extent without lowering the dividends paid the following year on individual policies, because of the natural tendency of dividends to increase as the cash value becomes larger. It follows that the amount of the dividend received at the end of any policy year is a conservative estimate of the amount that will be received at the end of the following year. The danger that such an estimate will seriously exceed the amount paid, is negligible.
7. Dividends reduce the cost of insurance for the year that has passed, not for the year that follows.
8. On any date except the anniversary date, the excess value of the policy, due to its participating rights, is an asset which is legally contingent, but in practice, certain as to existence, and almost certain as to amount.

With these facts in mind, I am of the opinion that the amount of the dividend should be included in the "Book Value of Life Insurance Policy Account" on the anniversary in addition to the cash value stated in the policy and the net premium paid. The same amount should be added to the cash value stated in the policy opposite the next anniversary, and the sum thus obtained used in determining the amount to be amortized on any balance sheet date. The illustration on the next page shows how this would work out in the example under consideration.

On March 31, 1939 the value of participation rights would be $67.57, and on June 30, 1939, $101.37. On September 30, 1939, a balance sheet would disclose the actual cash value of the policy, $5,070.00 plus the actual dividend for the sixth year.

The early years of a life-insurance policy offer a problem in accounting that does not fit any of the solutions offered above. H. A. Finney,[7] suggests that the entire premium be charged to expense in the years that end without a cash value stated in the policy. During the first year that provides a cash value, he prorates it to the fiscal periods that have closed by an adjustment to surplus.

In my opinion, the initial premium

[7] See Footnote 5, page 113.

Illustration 9

Computation and Analysis of Balance-Sheet Values as of December 31, 1938, For the Participating Policy Under Consideration, Assuming That the Dividend at the End of the Fifth Year Amounted to $135.15

Cash value stated in the policy for September 30, 1938		$4,050.00
Net premium paid for the ensuing policy year		1,216.35
Dividend for the fifth year		135.15
Total		$5,401.50
Cash value stated in the policy for September 30, 1939	$5,070.00	
Dividend for the sixth year estimated to be the same as the dividend actually received for the fifth year	135.15	5,205.15
Estimated amount to be amortized during the twelve months following September 30, 1938		$ 196.35
Balance of "Book Value" account on September 30, 1938, after payment of the premium, computed above		$5,401.50
Expired premium for the last quarter of 1939, one-fourth of $196.35		49.09
Book value of life-insurance policy on December 31, 1938		$5,352.41
Cash value computed in illustration 2	$4,879.87	
Prepaid life-insurance premiums computed in illustration 6	438.75	5,318.62
Value of participation rights		$ 33.79

Illustration 10

Accounting For a Life-Insurance Policy During the Early Years in Which There Are No Cash Values

Premiums to be paid before the first cash value stated in the policy becomes available, two times $1,351.50		$2,703.00
Cash value stated in the policy for the end of the second year	$1,050.00	
Probable amount of dividend payable at the end of the first year	108.12	
Probable amount of dividend payable at the end of the second year	114.88	1,273.00
Insurance expense for the first two policy years		$1,430.00
Insurance expense chargeable to the first policy year		$ 715.00
Insurance expense chargeable to the second policy year		715.00
Total		$1,430,00
Abstract of The Book Value of Life-Insurance Policy Account		
September 30, 1933, Check charged		$1,351.50
December 31, 1933, Expense amortized, one-fourth of $715.00		178.75
December 31, 1933, Balance (all prepaid expense)		$1,172.75
September 30, 1934, Check for net premium charged $1,351.50 minus dividend, $108.12		1,243.38
Total		$2,416.13
December 31, 1934, Expense amortized		715.00
December 31, 1934, Balance	$1,791.13	$1,701.13
December 31, 1934, Cash value $1,050 less discount	1,010.62	
December 31, 1934, Prepaid expense	$ 690.51	
September 30, 1935, Expense amortized, three-fourths of $715.00		536.25
September 30, 1935, Adjusted balance before payment of premium		$1,164.88
Proof		
September 30, 1935, Cash value stated in the policy		$1,050.00
September 30, 1935, Dividend for the second year		114.88
September 30, 1935, Actual cash value		$1,164.88

should be charged to "Book Value of Life-Insurance Policy" account. All of the years that precede the first stated cash value should be treated as a single period for purposes of amortization. The expense chargeable to each fiscal period can be computed by adding the premiums that will be paid, deducting the first stated cash value and the dividends that, probably, will be received, and prorating the difference. The illustration on p. 390 shows how this would work out in the example we have been using. In this illustration it is assumed that the dividend at the end of the first year is $108.12 and at the end of the second year, $114.88.

If the first dividend proved to be less than the estimated amount, the difference should be added to the $715.00 charged off in 1934. If the second dividend proved to be less than the estimated amount, the difference should be added to the $536.25 charged off for the first nine months of 1935. If the actual dividends exceeded the estimates, the differences should be subtracted.

Some policyholders permit dividends to accumulate with the insurance company year after year or use them to buy additional insurance. An experienced accountant should have no difficulty in applying the principles outlined in this paper to such a situation. However, the computation of the book value of the insurance policy from the information supplied by the policy itself and the premium notices of the company, would be impossible. Under such circumstances the only alternative is to secure the necessary information by correspondence with the insurance company. From the standpoint of accounting practice, the author of this paper recommends confirmation in all cases, no matter how the dividends are applied.

JOBS AND JUNIORS

RUSSELL KNOPP

At some time or another the question "How do I get a job with a decent accounting firm?" has more or less tortured the minds of many young accountants. In the past, and even today, obtaining information on this subject has been an exceedingly difficult task. Although many articles on the duties and problems of the junior accountant have been written, most, if not all, lacked some important element of truth. They necessarily were compiled either from the limited experiences of the writers themselves or from the experiences of a small number of junior accountants. The "real" information was lacking, for no large accounting office would reveal any of its innermost secrets. However, a good deal of this information has now been made available. The employment policies of a number of representative accounting firms have been described in the recent testimony in the McKesson and Robbins Case[1] in which twelve outstanding accountants[2] gave expert testimony on many aspects of accounting.

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[1] Official Report of Proceedings before the Securities & Exchange Commission in the matter of McKessons Robbins, Inc., Docket #1-1435, pp. 2866-4251. Smith & Hulse, Official Reporters. All future page references are to this report. In the writer's opinion, the testimony should be required reading for all interested in accountancy; for in no one place will one find so many things relating to accounting discussed by as many as twelve of the countr's leading accountants.

[2] Of these, eleven were practising accountants and one was a professor of accounting at the University of Illinois. They were questioned by William W. Werntz, Chief Accountant for the SEC.

It should be remembered, however, that twelve accountants furnish a rather poor sample on which to base definite conclusions. In some cases, the testimony conflicts, but in most cases a general agreement will be found among the twelve witnesses. Throughout the entire proceedings, the identical basic questions were asked of each individual accountant.

GENERAL EMPLOYMENT POLICIES

For convenience' sake, accountants and their policies of hiring and training junior accountants in this country may be divided into two major groups:

A. Those who accept the idea prevalent in Great Britain that accountants should be brought up through the apprenticeship system, and
B. Those who choose their staff by retaining college graduates with the proper academic background in accountancy and allied subjects, and who give their staff subsequent training.

The English Method

Of the various ways of hiring and training junior accountants described in the testimony, the method employed by Barrow, Wade, Guthrie & Company[3] most nearly approximated the English system (A). Mr. Charles B. Couchman, a general partner in the firm, described his firm's policy somewhat as follows:

Prospective juniors for the firm's permanent staff are first engaged as office boys. These boys must at least be high-school graduates, preference being given to undergraduates or graduates of colleges. All are immediately required to start evening accountancy courses with the C.P.A. certificate as their goal.

The work they perform is concerned primarily with finished reports, and in due time they become quite familiar with reports delivered to clients. In addition, they also learn much about the contents and the reasons for including various items in the reports. Afterwards they become familiar with the process of filing and thus more or less acquainted with the working papers prepared by the firm. These boys are then moved over to a comparing department in which they proofread typed reports; finally, they are required to go through a period of reference checking, that is, checking back items in the reports to their original sources.

After a year or two of this work, the boys are assigned to some type of junior work. The firm endeavors to assign them to a staff which is maintained for a considerable period of time under the direct supervision of trained men. Their work here is limited to what might be called detailed work in which they gradually acquire experience with the more important phases of material facts.[4]

Mr. Couchman considered this method of training juniors an excellent one and the results obtained from the later advancement of these juniors to semiseniors and seniors has been so satisfactory that the firm now endeavors to follow this procedure from the very beginning.

The American Method

The remaining ten firms chose their staffs from college graduates. Four general ways of selecting the permanent staffs were indicated.

1. Seven of the firms[5] went directly to the colleges and selected men with outstanding scholastic records, good personality, etc., who had majored or specialized in accountancy. These men were then subjected to the

[3] Barrow, Wade, Guthrie & Company usually employs 260 people on its staff, has 17 general partners and 16 branches in the United States in addition to many reciprocal arrangements in foreign countries.

[4] Pp. 3657–9.

[5] Arthur Andersen & Company; Haskin & Sells; Klein, Hinds & Finke, Lybrand, Ross Bros. & Montgomery; Mathieson, Aitken & Company; Scovill-Wellington & Company; Webster, Horne & Blanchard. One of the witnesses, Professor Scovill, did not represent any firm; hence, only 11 firms will be mentioned.

most rigid examination as to character and attainments, on the theory that "The chain is as strong as its weakest link."

2. One firm[6] coöperated with the American Institute of Accountants which tries to select the abler students from a number of colleges in an endeavor to place them with accounting firms. Another firm, a few years ago, also coöperated with the Institute but has more or less given up the practice.[7]
3. The remaining two firms[8] selected their permanent staffs from their temporary staffs, the latter being obtained from colleges and schools. Selections for the permanent staffs were made on a competitive basis; and other qualifications being equal, those with college training were chosen. The competitive basis used in one firm was built around a system of continuous reporting in which the man in charge of a particular engagement evaluated the work of the men under him and reported to the personnel director. These reports usually dealt with the intelligence, the adaptability, and all of the other characteristics necessary to judge a man's capabilities.
4. In a few instances, some accounting firms obtained their juniors either through personal contacts or through letters of application. Each letter received was usually reviewed and the more promising men interviewed. In addition, agencies specializing in placing accountants were sometimes asked to submit their lists, and, on occasion, the placement bureau of the New York State Society of C.P.A.'s was consulted.

Nowadays, many college placement bureaus keep in touch with the major accounting firms regarding their undergraduates and graduates and seem to be making some headway in placing them. On the other hand, some accounting firms actually go out and look for the more promising men in the field; but unfortunately this is not a very common practice.

[6] Peat, Marwick & Company employs several hundred people on its staff, has 29 offices and 25 partners, p. 2721.

[7] Klein, Joseph J., p. 3908.

[8] Touche, Niven & Company has 17 partners, 9 branches and a staff of 150. Mr. Victor H. Stempf, a partner, represented the firm at the hearings, p. 3006.

Ernst & Ernst, represented by Mr. George D. Bailey, has 45 offices, 27 partners, and 850 people on its staff, p. 4059.

QUALIFICATIONS FOR A JUNIOR

At this point it seems appropriate to attempt to discover what qualifications these firms deemed necessary in an applicant before they would hire him as a junior accountant. Most, if not all, of the tabulated points are considered, though not necessarily in the order given.

1. Character.
2. Technical knowledge of accounting.
3. Resourcefulness.
4. Tact.
5. Judgment.
6. Personality.
7. College marks.
8. Previous business experience.
9. Ability to pass firm's exam.
10. Appearance.
11. College degree.
12. Adaptability.
13. Ability to write and speak English.
14. References from Heads of Departments, etc.

Not all the concerns gave primary emphasis to these qualifications. Mr. Samuel J. Broad, a partner in Peat, Marwick & Company,[9] testified that his firm employed a junior (he called them "raw" juniors) for "the long pull" and not for what they were when they came to him. "We look to him in the future more than in the present; we expect him to develop." But Mr. Broad was definitely in the minority on the point of experience, for most of the other accountants desired some previous business or bookkeeping experience, unless outstanding scholastic attainments had been achieved. Furthermore, all accountants are now agreed that a college degree is becoming more and more of a prerequisite since the modified New York C.P.A. law went into effect in 1938; this attitude was summarized by Mr. Wellington: "If a man is going to succeed, he has to realize he has to spend a lot of time preparing himself."[10]

[9] See n. 6.

[10] Scovill-Wellington & Company has 11 partners, 10 branches and a staff of 125, p. 2867.

FURTHER EDUCATION AND TRAINING

If the applicant has successfully weathered the storm, he is usually hired and taken in hand. Most of the accounting firms immediately put pressure on him to continue his studies and to prepare for the C.P.A. examination. Particular attention is given to these young men because of a desire on the part of some accountants to develop their own successors.[11] Thus, a junior soon finds himself going through a course of teaching and training to which he devotes many months of his time. Many talks and lectures are periodically given to him by the more experienced members of the firm. One firm in particular,[12] in which several young men were preparing for the C.P.A. examination at the same time, arranged a coaching course for them, rotating seniors in order to avoid placing too great a burden on any one man. In addition, the junior is required to attend the discussion groups and seminars held during the course of the year; at times, some of the partners themselves conduct these seminars and discussion groups. The practical viewpoint is almost invariably injected into these discussions and specific readings are frequently assigned to the young juniors.

This interest in the development of the younger men by some of the older men of the profession is really something of which the entire profession might well be proud. It certainly is encouraging to a young junior, and particularly to the writer, to know that somebody is really interested in him after all, and that all his plugging and training is not in vain.

WORK OF THE JUNIOR

After a few months of inside training, the junior is usually ready for his first job of actually helping in the audit of a set of books. Most accountants agree that some accounting knowledge is necessary to perform the work of a junior which at the very outset consists of:

1. The so-called routine tasks.
2. Bank and petty-cash reconciliations.
3. Verifications of additions.
4. Aging of accounts receivable.
5. Verification of extensions and computations.
6. Getting out confirmations.
7. Analysis of accounts.
8. Scrutinizing signatures and endorsements.
9. Preparing minor schedules.

In short, the junior is usually assigned those routine detailed tasks which can be effectively controlled and supervised by an experienced accountant; this type of work is often called "labor." As the junior gains more experience, he is naturally given more important and difficult work to do, and he must early show signs of developing or his tenure on the staff is apt to be very short and uncertain.

In connection with the work of the junior, the question is raised, "Whose responsibility is it to train the junior?" Suppose, as it frequently happens, the junior does not know what to do. Who is supposed to show him? Every accountant who testified stressed unequivocally both the responsibility and the professional obligation of the more experienced staff members, i.e., the seniors and supervisors, to guide, teach and train the juniors and assistants under them. This guidance may be informal; at times, the junior may be shown exactly how to perform a given task. The senior's duty is to direct the work of the junior, explaining why certain things are done, and why certain omissions or faults of the junior may be detrimental to the work as a whole; in addition the senior is under obligation to report to the office anything he thinks may be of help in either the further education or the advancement of the junior.

[11] Bell, William H., p. 3138.

[12] Horne, Henry A., p. 3498, partner in Webster, Horne & Blanchard which has two offices, four partners and a staff of 25.

The junior is often encouraged to ask questions on an engagement, and if necessary the significance of every item is explained to him. At other times, the senior in charge may discuss the various problems that arise from day to day on an engagement; thus, a wide-awake junior often hears many general accounting problems discussed. Furthermore, after the junior has completed his work, The senior usually goes over his workpapers, carefully noting the junior's written comments on his audit steps and asks him all the penetrating questions he can think of.[13] How he did his work; was it done in a workmanlike manner? Eternal vigilance is definitely required on the part of seniors and supervisors since all of the accounting firms relied on their reports to judge the work and progress of the junior.

Naturally all juniors are expected to be alert and to report irregularities, such as the lack of endorsements or signatures on checks and vouchers, different dates and amounts, and other discrepancies; failure to do so usually means dismissal at the first opportune moment. In the beginning the junior is often told what irregularities to look for, but gradually he is forced to learn by himself for detecting irregularities is considered more a matter of alertness than of knowledge.

FAMILIARITY WITH A NEW BUSINESS AND ITS RECORDS

All accountants expect their staffs to become familiar with the records and documents of the trade or industry in which the client is engaged (although the knowledge of a specialist is not necessary), and to know something about the business, its operations, the nature of its products, the flow of materials, etc. The staff is also expected to have a good idea of what the personnel is like; otherwise, it is considered practically impossible to perform a good audit. In the case of a manufacturing concern, staff members are usually urged to go on exploring expeditions in order to familiarize themselves with the operations.[14]

On the other hand, juniors are not required to know every type of document or record with which they may come in contact because the variety of cash books, for example, in a large corporation with many subsidiary records, is so vast that even the best accountant in the world would be forced to study them before he could be sure he was familiar with the whole system.

As to what irregularities to expect in these documents: the junior is usually taught to recognize them through the medium of direct instruction which may occur at staff meetings, at informal talks, or through the constant personal guidance which comes through association.[15] Such knowledge and training is also gained in the junior's college courses, or in the training he receives in the office before being assigned to an engagement, or through the various bulletins, letters, etc. which his firm may issue from time to time.

ADVANCEMENT AND THE C.P.A. CERTIFICATE

As the years roll along, the junior begins to think of advancement to the status of a semi-senior and obtaining his C.P.A. certificate. Whether the C.P.A. certificate is a prerequisite for advancement in a firm seems debatable, accountants being almost equally divided on this question.[16] Some accountants claimed that it was not necessary for advancement to a senior;

[13] Jones, Charles W., p. 4178, partner in Arthur Andersen & Company employing several hundred on its staff and having 10 offices and 15 partners.

[14] Bell, William H., of Haskin & Sells, with 33 offices, 57 partners, and a staff of 960, p. 3145.

[15] Klein, Joseph J., p. 3917.

[16] Of the twelve questioned, seven said the certificate was a necessary prerequisite for advancement in the firm.

all agreed, however, that the certificate was a prerequisite for a partner or a manager of an office. One firm[17] definitely required the certificate for advancement and for retention on the staff, claiming that the great majority of its semi-seniors were C.P.A.'s. But no doubt exists that juniors are continually urged by their employers to take the examination as soon as it is feasible.

If possible, promotions in the staff are made from within the ranks. This method seems sufficient to meet the requirements of the very large accounting firms, but in the smaller firms, recourse to the outside was often found necessary. Most of the accountants found that they had "to grow the seniors themselves," for rarely was a good senior to be found on the loose. Another firm[18] of accountants would not take on men to put over other men and advancement from within the ranks was their invariable rule. Therefore, one can venture to say that once connected with these firms and possessed of the necessary abilities, advancement to the higher ranks is relatively certain, depending as always on the individual himself.[19]

OBITER DICTUM

Although the testimony leads to an optimistic view of employment and large possibilities for the would-be junior, it must be remembered that there are many factors not mentioned which must be considered. For example, the name and reputation of the school from which one graduates, whether or not a member of the firm is on the Board of Trustees, who one's uncle is, if one be fortunate enough to have an uncle, what one's political, religious or economic beliefs are, what mood the partner is in when an interview is granted: all these little things play their part and, consciously or unconsciously, influence the selection. Nobody, if he is intellectually honest with himself, should attempt to paint a deceiving picture of life; yet with only the testimony of a handful of accountants to serve as a guide, a rather rosy picture was unavoidably and unintentionally painted. On the whole, the life and work of a junior is a hard one; and if he is fortunate enough to lead the interesting and fascinating life as described in the testimony, it would be well for him to remember that there are fifty others who were not as lucky as he.

[17] Touche, Niven & Company.

[18] Mathieson, John K., p. 3381, partner in Mathieson, Aitken & Company of Philadelphia with 4 partners and a personnel of 40.

[19] The last firm is Lybrand, Ross Bros. & Montgomery, represented by Norman J. Lenhart, and composed of 52 partners, 27 offices and a staff of 750. In the figures given for the sizes of the eleven staffs, these figures did not include the extra personnel hired in the busy seasons, in which case the normal permanent staffs would be increased anywhere from 30 to 50%.

RESPONSIBILITIES OF ACCOUNTANTS IN A CHANGING ECONOMY

DR Scott

In the last generation there has been a decided change in the position and responsibilities of the accounting profession. This change is not an isolated phenomenon. It ties in with both the current changing relations between business and government and the long-run development of the accounting profession. It is part of a disturbed and unstable economic and social situation which has led

accountants and many other groups to seek guidance in the formulation of basic principles.

In order to appraise the present position in any respect, the most effective background for the task is a survey of past developments—or an account of how we arrived at the position we now occupy. Such a survey for accounting would reach far beyond the limits of one brief discussion. Nevertheless a background is needed and if a complete one is not possible, an incomplete treatment is better than none at all. Under these circumstances it may be well to point out first those portions of the background which are not going to be used.

For example, it might be well to trace the development of the journal or books of original entry. Similarly an account of the evolution of the ledger or the income statement and balance sheet might prove useful. A description of how the modern complex system of a large-scale business enterprise has evolved from the original daybook, journal and ledger would certainly be of value, or how, in the course of its development, double-entry bookkeeping has been adapted to meet the peculiar needs of different kinds of business enterprises. This latter task, however, would require not one but a whole series of discussions. An elaborate discussion could be devoted to technical aids to the keeping of the accounting record: loose-leaf ledgers, the evolution of special forms and the use of machines culminating in the current use of punched-card tabulating equipment. Again, all of the above items might be combined in one general summary review of the technical evolution of accounts.

It will not be possible, however, to do any of these things. The whole subject of technical accounting development as background will have to be dispensed with here.

Turning to a different aspect of accounting history, it might be desirable to picture the evolution of the typical accountant, or more precisely the evolution of the typical activities of the professional accountant. The experiences of the last ten or fifteen years have certainly afforded a convincing demonstration of the fact that they do change. It might be well to recount the development of professional societies: The contributions to professional development made by the American Institute, the late American Society and the various state societies, afford materials for an impressive presentation. A résumé might be made of the recognition and regulation of the profession by the various states in order to obtain a significant picture of professional evolution. Or one could consider the history of training for the profession by apprenticeship and by a combination of academic training and apprenticeship. The evolution of academic instruction in accounting is itself an interesting and significant story.

All of these help to make up the formal professional development of accounting. They are enumerated here merely in order to point out that they are not going to be included in the present discussion.

It would be possible to choose a background lying somewhere between the two just described. For example, accounting is sometimes referred to as a record of transactions, as a summary of business operations or a control of costs. We might trace the evolution of accounts as an accounting for the operating costs of business enterprise. In its earliest beginnings double entry did not afford an accounting for operating costs; in the trading enterprises of early modern times the accounting for operating costs was so little developed that the books of account were closed only at long and irregular intervals. Such a history would disclose the evolution of accounting through the adoption

of regular closing and a long and constant increase in the number and complexity of expense accounts; how the spread of business enterprise to the field of production after the industrial revolution carried with it a system of accounts developed by merchandising or trading enterprises, and how the comparatively recent development of cost accounting represented a belated adaptation of accounts to the industrial field.

The process of evolution in accounts as an accounting for the costs of business operations is still going on at an unabated pace. Current changes are to be viewed in the light of a development which reaches back through the whole history of modern accounting. But this particular evolution is not the one selected for the present discussion.

Still another possible background would be to present accounting as one feature of a general picture of professional development. This point can be illustrated in an example from academic history: In 1842 President Francis Wayland, of the institution that is now Brown University, expressed the opinion that the college would not be able to keep its doors open unless it adjusted itself to new conditions and taught engineering and other practical subjects. In the century since that time higher education has been characterized by two things: the expansion of the sciences and the rise of professional education. Properly interpreted they are different aspects of one trend.

This trend in higher education reflects a corresponding trend in society in general. In the last one hundred and fifty years American society has changed from a pioneering and essentially agricultural society to a highly complex industrialized and professionalized society. Not only has the number of professions been multiplied but also the specialization within them has been correspondingly increased: a specialization which has been as pronounced in the trades as in the professions. We have become a nation of experts, specialists and professionals.

The evolution of the accounting profession might well be pictured as one aspect of this general trend of professional development; but that picture is not to be included in the present discussion.

Summarizing the discussion to this point, we have eliminated first, the evolution of technical accounting methods; second, the development of formal professional organization and its official recognition; third, the evolution of accounts as an accounting for the operating costs of business enterprise; and fourth, the evolution of the accounting profession as part of a general trend of professional development.

To understand why accounting has become a profession the explanation must be sought not in accounts themselves but in their economic environment. The feature of that environment which is most immediately significant is the evolution of the unit of business enterprise.

In the middle ages the prototype of modern business enterprise was the individual merchant. With a resumption of European commerce on a larger scale, new forms of enterprise appeared. Family groups of traders developed of which some famous examples have come down to us like the Fuggers in Germany. The partnership was essentially a legal family patterned after the informal and extra-legal association of the family group. The joint-stock company was an adaptation of the partnership to provide greater continuity of organization as well as the association of larger numbers of persons and larger volumes of capital. By a further adaptation the joint-stock company gave way to the limited-liability corporation and it in turn has led to the current forms of super-corporate organization to be

found in present day giant business combinations.

This evolution in the unit of business activity has been characterized by a constant increase in its size and complexity, a steadily increasing importance of close continuity in its operations, and a progressive separation of management from ownership and of the higher ranks of management from technical operations. In these changes we find an explanation of the development of accounting functions and the situation which gave rise to a professional status for accountants.

In its beginnings, double entry was a record of the contractual relations of the money lender or merchant with his debtors and creditors. The slow development of the profit-and-loss account, the use of increasing numbers of expense and income accounts, the regular closing of the books instead of the mere closing of accounts for particular ventures, and a gradually increasing use of summary statements represent the development of a second function, that is, the use of accounts as an instrument of managerial control. At the start of the development of cost accounting this control function had already become well established. General management had been divorced from technical operations and had become increasingly dependent upon accounting reports. The introduction of cost accounts represented an extension of the record function to cover numerous internal operations but this extension was wholly incidental to the primary purpose of increased managerial control.

The institutional machinery of competitive market control over economic affairs developed upon foundations of individualistic social theory. It has worked progressively less and less well as the current system of big business economics developed. The trend towards an increasing government control of business started in particular areas like railroad transportation and public utilities, but of late it has extended to general business enterprise as illustrated in the work of such agencies as the Federal Trade Commission and the Securities and Exchange Commission.

When governmental agencies have undertaken to regulate business enterprise they invariably have adopted as their chief instrument of control the tool which business enterprise itself had already developed, accounting. Thus the control function of accounts takes on a new and quite different form. Instead of being merely a tool of control by business enterprise they become a tool for the control of business enterprise itself. And just as the extension of the record function which was involved in the development of cost accounts was shaped by the introduction of a new function so this extension of the control function is a result of the coming into the picture of a third major accounting function. The guiding purpose of the regulating agency and its use of accounts is the protection and equitable adjustment of equities involved in the regulated business enterprise. This third major function is aptly described as a protection-of-equities function.

However, government commissions did not initiate this latest accounting function nor do they represent its most significant development.

Government regulation of business enterprise comes in as a supplement to or substitute for regulation by a competitive market. The system of competitive market control made possible a comprehensive scheme of economic organization by adjusting the conflicts of economic interests of all those who resorted to the market. In a thoroughly individualistic society this would mean the conflicting interests of all the individual buyers and sellers in the market. But when the unit of business enterprise operating in the market became a

large and complex group of different classes of individual interests, the market could not adjust conflicts of interest which were internal to the unit of business enterprise. The lack of effective machinery for adjustment of these internal interests has given rise to numerous cases of mismanagement and fraud which form a deplorable blot on the record of modern corporation management.

The responsibility for adjustment of these interests internal to the unit of business enterprise gradually has been shifted to accounts and the accountant has been elevated to a professional status thereby. Accounting has emerged as a system of rules or principles and a system of techniques which transcend the authority of the business management. The business manager is not free to charge expenses to asset accounts or the reverse. The accountant's certification that given financial statements reflect a proper application of accounting methods and principles derives its significance from the protection which it affords the interests of those who are affected by such statements. The public accountant is not a hired man of business management. Just as the lawyer is an officer of the court, so the public accountant is a public officer. He occupies a position of public trust. The general control which accounts and the accounting profession exercise over business management far outweighs in scope and importance the specific forms of regulation effected through government commissions. In its recognition and regulation of the accounting profession the state gives official sanction to this social control over business enterprise exercised by accounts and accountants.

Of late a great deal has been said about the formulation of accounting principles. Doubts have been expressed on the possibility of subordinating the public practice of accounting to a system of principles. If by a system of principles we mean a system of rules worked out to apply in nice detail to every situation so that the accountant would be relieved of all necessity of exercising discretion and judgment, then it is true that no such system can be or should be devised.

To cite an analogy for the field of law, however, the development of a body of legal principles does not do away with the need for jurists. Indeed the truth is that there could be no one worthy of the name of jurist without a system of legal principles. A similar statement is applicable to the accounting field.

Without principles to guide and support their decisions, the members of the accounting profession would be placed in the position of exercising a form of composite personal dictatorship over business enterprise. With a comprehensive and consistent system of principles, their decisions may be made more intelligently and upon a basis of impersonal principles. The practice of the profession will be integrated thereby. This matter of professional guidance is, however, of relatively minor importance. It is only a means to an end. The important consideration is the result of such practice in terms of a more effective social control over economic processes.

Whence comes the present demand for accounting principles?

Business management has come to recognize its dependence upon accounts but this particular demand for guidance does not come from management. Most accountants recognize shortcomings in the accounting profession. They realize the importance of maintaining and improving professional standards. But it would not be true to say that this demand for principles comes fundamentally from accountants. Those who have been appointed to exercise the regulating authority of government commissions have perhaps been most vocal in their demand for accounting

principles but the demand does not originate with them any more than it does with business management or the accounting profession. The demand for accounting principles is not a creation of any person or group of persons. It is rather a product of the concrete process of living. The clear formulation of a consistent body of accounting principles is a necessary step in current economic evolution.

With the foregoing discussion as a background there is one brief point that should be made with regard to the present position of accounting and the responsibilities of accountants. It can be presented best as an analogy:

When the rise of modern commercial activity took place in Europe, trading was carried on by a special class of merchants. These merchant traders developed a system of rules or laws to govern their dealings with each other. They also developed their own courts and judges to apply this body of nonprofessional law which came to be known as the law merchant.

However, with an increasing freedom of individual action both in economics and in other spheres of human activity, trading ceased to be the prerogative of a special class. In England the common law judges of the Elizabethan period took an aggressive stand to the effect that a man did not need to be a merchant to enjoy the legal privileges formerly accorded to merchants and that the law merchant was part of the common law.

In its absorption of the law merchant, the common law recognized the market as the prevailing and accepted technique for the adjustment of conflicting economic interests. By this action the common law assumed responsibility to keep the market open and free and thus gave legal status to the economic system of competitive market control.

We are now confronted by a situation which is analogous to that which prevailed when the law merchant was absorbed into the common law. The accounting method of adjusting economic interests has become so interwoven with the current control of economic processes that the law of today finds itself under the necessity of seeing to it that accounts are kept in accordance with correct principles just as the common law judges of the Elizabethan period were impelled by the forces of economic change to take over the administration of the law merchant. This absorption of accounting into the law of today is taking place in various ways. It is to be seen in many cases at law involving major economic interests. It is even more obvious in the rules and precedents of regulating commissions which are given the force of law. It constitutes a major element in shaping the currently important and rapidly developing branch of law known as administrative law. But most important of all is the indirect responsibility which the state has assumed in its regulation of the accounting profession.

That accounts will constitute a central feature of the system of economic control in the future is a matter which is no longer open to question. There is no cause for concern on that score. The danger is rather that doctrinaire or half-baked formulations of principles may be frozen into the rigid requirements of law. And the surest way to bring about the adoption of such half-baked principles is for leadership in the accounting profession to take the position that public accounting practice cannot be subordinated to a system of accounting principles or theory. Somehow, the positions of the doctrinaire theorist and the rugged individualist who refuses to recognize the importance of theory must both be avoided.

THE ROBINSON-PATMAN ACT AND QUANTITY DISCOUNTS

H. J. Ostlund

The Robinson-Patman Act is an amendment to the Clayton Anti-Trust Law. The primary purpose of this amendment is to do away with price differentials as between competing customers to the extent that they were not warranted by economic considerations. The law grew out of the fact that certain groups having great buying power, such as leading chains and mail-order houses, seemed to have buying advantages that were not possessed by the multitude of their smaller competitors: advantages which appeared to be out of proportion to the actual economies growing out of trading in the larger quantities of merchandise.

The act has two main parts, the civil and the criminal. The gist of the civil part may be given as a part of the amendment to section 2 of the Clayton Act:

> Sec. 2 (a)—That it shall be unlawful for any person engaged in commerce, in the course of such commerce, either directly or indirectly, to discriminate in price between different purchasers of commodities of like grade and quality, where either or any of the purchases involved in such discrimination are in commerce, where such commodities are sold for use, consumption, or resale within the United States or a Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, and where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly in any line of commerce, or to injure, destroy, or prevent competition with any person who either grants or knowingly receives the benefit of such discrimination or with customers of either of them; Provided, That nothing herein contained shall prevent differentials which make only due allowance for differences in the cost of manufacture, sale, or delivery resulting from the differing methods of quantities in which such commodities are to such purchasers sold or delivered.

Further qualifications are made so as not to prevent the closing out of merchandise, the disposal of deteriorated merchandise or sale under orders of public authority.

The second part of the act has to do with certain transactions which are to be regarded as criminal in nature and which involve criminal penalties. The gist of that is as follows:

> Sec. 3—It shall be unlawful for any person engaged in commerce, in the course of such commerce, to be a party to or assist in, any transaction of sale or contact to sell, which discriminates to his knowledge against competitors of the purchaser, in that any discount, rebate, allowance, or advertising service charge is granted to the purchaser over and above any discount, rebate, allowance, or advertising service charge available at the time of such transaction to said competitors in respect of a sale of goods of like grade, quality, and quantity; to sell or contract to sell goods in any part of the United States at prices lower than those exacted by said person elsewhere in the United States for the purpose of destroying competition, or eliminating a competitor in such part of the United States: or, to sell, or contract to sell goods at unreasonably low prices for the purpose of destroying competition or eliminating a competitor.

Violation of this provision of the law subjects the violator to punishment by the Federal Government with fines or imprisonment, or both, inflicted in case of conviction.

Cost accountants as such are primarily interested in the first part of the act which involves the granting of quantity discounts and the proper justification thereof. It is obvious that transactions in order to become subject to the provisions of the act must have certain features. There must be a group of transactions in which there is a price discrimination as between different customers. They must be transactions in

interstate commerce. The transactions involved must have occurred within the United States or its possessions. The price discriminations must have been as between persons actually or potentially in competition. Finally, the price discriminations must have been such as to work injury to one or more of the competitors or to tend to destroy competition, or to create a monopoly. The proviso, however, included in the act is that quantity discounts, which obviously are price discriminations, may be granted if they do not exceed differentials in cost to the seller by virtue of the sale in larger quantities. This is the point that is of particular interest to the cost accountant.

There are two general types of quantity discounts expressed directly in terms of price. The one is a volume discount in which a customer is given a percentage rebate of his purchases in the event of his purchasing a certain volume in a given period of time without reference to the number of purchases that he makes during that time. The other is quantity discount based on the size of the individual order, whether with reference to the order as a whole or to particular items of merchandise that appear on the order.

The first of these, the volume discount, is difficult to justify on the basis of cost differentials since the conditions under which they may be offered are affected by so many different factors that it is almost impossible to arrive at satisfactory conclusions as to whether or not they are justifiable. Actually, it has appeared at times that the costs of supplying purchasers of large volume may exceed as a percentage of sales the costs of supplying certain smaller purchasers—the purchasers of the larger volumes may make their purchases with a much larger number of orders, demanding a greater variety of items, and requiring relatively greater frequency of delivery and other services incident to the supplying of the merchandise to the purchasers of smaller volume. Therefore volume discounts will not be specifically dealt with in this discussion.

In the more common quantity discount price differentials are based on the quantity purchased or ordered at a given time. In justifying such quantity discounts the differentials in cost of distributing in larger unit quantities are more readily calculable.

According to the provisions of the act, quantity price differentials which are based on differences in the cost of manufacture, sale, or delivery, are justifiable. It has appeared, however, that the cost of manufacturing goods of like grade or quality for different customers is not subject to wide differentials. Generally speaking, the authorities expect that concerns manufacturing goods for resale apply costs on an average or over-all basis; the differential costs of specific orders or quantities will not be considered. It is therefore likely that in the vast majority of situations quantity discounts will have little basis for justification when based on manufacturing cost differentials. It is not unlikely, however, that situations may exist where goods are produced to the special order of customers and where the cost of production may involve considerable expense for the set-up or preparation for manufacture, and where certain differentials in manufacturing costs may appear. But such developments are much more likely to occur in connection with goods that are not entirely standard and which therefore do not come under the classification of being goods of essentially like nature or quality. Thus the cost accountant will find for the most part that in dealing with quantity discounts his problem will be to measure differences in the distribution costs of orders of different sizes.

The problem of justifiable quantity discounts will be presented to the cost accountant under two general sets of condi-

tions: first, a concern may become involved in difficulties with the Federal Trade Commission on account of price differentials which already exist in which event the cost accountant will appear on the defensive in his effort to determine whether or not the discounts are justifiable under the law; second, he may be called upon to furnish management sufficient information to insure protection against the possibility of having quantity discounts questioned by the Federal Trade Commission or by competing customers. Most of the attention that has been given to the subject of price differentials seems to have assumed that the first situation is the most prevalent and that it furnishes the sole occasion for the examination of costs. Actually, however, the cost accountant's services are of the greatest value to the management in the second situation—where his information acts as a preventive rather than as a defensive measure.

The cost of distributing orders of different sizes may be classified as between the cost of obtaining the order, and the cost of filling the order. The cost of obtaining the order includes promotion costs and the actual selling expenses. The cost of filling the order includes the clerical cost incident to getting the order filled and the cost of such manual and other activities as are involvd in shipping or delivering the goods.

At this point it is necessary to call attention to the fact that cost methods developed from production activities are inadequate when applied to distribution activities. Production costs are for the most part a function of goods produced; to produce more goods it becomes necessary to incur certain costs in almost direct proportion to the quantity of output. This refers particularly to materials and labor. It is also necessary to provide various productive services such as plant and equipment, supervision, and other indirect services in order to get the desired results in the form of production. Selling costs, on the other hand, are mainly not direct in their nature and with relatively few exceptions are not proportional to the amount of goods sold. Production in its activities is centered within relatively narrow limits where the flow of materials can be observed from beginning to end, and where the processes are kept under definite control. In the production process the management can observe and maintain close control over the flow of its dollars from the outlay to the realization from sale, but when the management spends money for promotional and other distribution activities, the effects of these dollars spread as widely as the mails can carry them or as far as the radio waves can penetrate, and the results are at the time of the expenditure entirely indeterminate. Even after the results have been accomplished, it becomes virtually impossible in many cases to determine what costs actually have been associated with particular results. As a consequence, it has been found necessary to use entirely different principles of cost allocation when dealing with certain elements in distribution cost. To be sure, certain of the activities of distribution are more or less mechanical or manual, and the results are more or less conditioned by the activity itself. Order filling costs, both manual and clerical, are not substantially different from the costs of activities usually associated with production.

Analysis of distribution cost is an analytical process which may have to be carried out from time to time for particular purposes. It does not consist of continued compilation of costs on cost sheets which are ultimately to be filed in the vaults. It must be live information that can be focused on any particular point or problem that the management may have to face. Therefore, the cost accounts must be carried in detail sufficient to enable the cost accountant to analyze and synthesize

them in any way that he finds necessary for a particular purpose.

Along with this detail of expense analysis there must also be sufficient detail on distribution operations with respect to commodities, salesmen's territories, customers' orders and items on orders to make it possible to answer any cost question that may arise. Both the expense analysis and the operating statistics must be prepared in anticipation of many possible uses.

Then, too, in analyzing distribution costs it is more frequently necessary to resort to the use of differential costs than when dealing with production costs. Generally the principle of differential cost is applied to variations in the quantity of output, but it should be broadened to include any variation in total cost resulting from any variation in any activity. It is necessary to use this broader concept in applying the principle to distribution costs.

Joint costs also show up more vividly when applied to distribution costs than when applied to production. For the most part accountants seem to apply joint-cost principles at the point where the product of a plant or a process finally emerges but the existence of joint costs should be recognized wherever for any given expenditure there are realized units of service that have different economic significance. This principle applies to rent paid for a building the different floors of which have admittedly different rental value. It applies to compensation paid an employee who renders different classes of service, such as a salesman or a salesmanager. Any allocation of costs involving this sort of situation is always open to question both as to its correctness and as to its significance.

Also it becomes difficult in allocating some distribution costs to find actual performance bases. It is necessary therefore more generally to use the principle of intention, i.e., to allocate costs in advance to the objects they were intended to realize or the functions they were intended to serve rather than in retrospect to apparent results obtained.

In spite of the difficulties that are involved in the analysis of distribution costs, it is important that accountants recognize the possibility of obtaining much useful and definite cost information without having to make a complete and full allocation of all costs. Actually, in order to justify quantity price differentials, it is not necessary to know the total cost of distributing specific quantities of merchandise, but only to know the differences in cost to distribute different quantities.

The cost of getting the order, as mentioned previously, is divided into two general classifications, the promotional and the selling cost. It is doubtful whether or not promotional costs will be found that can be directly assignable to specific orders. For purposes of determining quantity differentials, promotional costs have little or no significance. The selling cost applicable to individual orders is an important element and in many cases can be allocated reasonably to specific sales orders. Selling costs involve salesmen's cost and sales-management cost. Sales-management and other general sales-supervision costs cannot generally be allocated to specific orders except on an arbitrary basis; and it is probably best not to attempt to allocate them at all. The salesmen's costs consist of salesmen's compensation and salesmen's traveling expenses, costs which may be allocable.

The first question that arises is how to apply a salesmen's compensation to specific orders. That question is rather difficult to discuss in the abstract. First it must be recognized that in many cases salesmen perform two functions, one of which is order writing or selling directly, and the other of which is more or less of a service function, such as informing retailers how best

to promote the sales of the commodity, acquainting them with its specific characteristics and performing other general retailer services. This discussion must limit itself to the type of situation where a salesman has a regular route serving customers continuously, and the conclusions drawn must not be too broadly or indiscriminately applied.

To determine the proper allocation of the salesmen's compensation, it is necessary to ascertain as nearly as possible how much of his remuneration is for these general services and how much for actually taking orders. There is no one rule for making this determination; the division must be based on the best judgment that the management and the sales executives can bring to bear on it—the cost accountant is not in a position to question the allocation between these two functions. Assuming then that the correct portion of the salesmen's compensation has been charged to order taking, the next question is how shall that portion be applied to individual orders. Salesmen may be paid on a salary basis, on a commission basis, or on a combination of the two. The commission may be a flat rate for all sales or it may be on the basis of different rates for different commodities, and may possibly include a differential incentive rate based on quotas. If it is assumed that a salesman is paid a straight salary, and that he is covering an assigned territory, following a regular schedule, and meeting all of his customers under the direction of his sales manager, it is obvious that his compensation applicable to selling should be applied equally per order. In this case it is assumed that the salesman has no choice with respect to the selection of the customers on whom he may call or with respect to the service that he renders them. Suppose, however, that the salesman is paid on a commission basis but that he is still scheduled and routed, working under specific directions of his management. Should his cost be assigned to the orders on the basis of volume, which is, of course, the basis on which he is paid? Most accounts would doubtless say "Yes." However, the correctness of that answer may well be questioned; his compensation in this case, it is held, is not strictly of the incentive type but is generally developed in such a way as to provide him sufficient total compensation to encourage his best efforts and to keep him attached to the sales force. It is therefore believed that the manner in which the compensation is paid does not necessarily govern the manner of its allocation to specific orders; under these conditions, compensation should still be allocated to orders equally. One might go further and assume that the salesman is being paid on a scale of commissions higher for the more profitable items than for the less profitable. But if it is still assumed that the salesman himself has no choice as to the selection of commodities that he sells, but must still serve his customers' needs completely, a condition which holds true in many actual cases, the commission is still inclined to hold that for purposes of determining the selling cost per order, the total compensation paid for order taking should be applied equally per order. Further justification of this point of view, unorthodox as it is, may be found in the fact that if the selection of merchandise to be sold were other than what it is, or if the rate of gross profits or any other condition with respect to selling were to change, it would become necessary to adjust the scale of commissions. And under any circumstances the salesman would have to be paid a total commission sufficient to keep him attached to the company. In other words, for purposes of making certain allocations, and this is one of them, the use of actual figures as revealed by the books is questioned; instead, the average figures are believed to more nearly reflect the facts.

What has been said concerning salesmen's compensation applies as well to salesmen's traveling expenses.

At this point a question might be raised as to how such an allocation might be accepted in case the cost accountant were on the defensive. The acceptance would depend in large part on the point of view of the authorities to whom the presentation is being made their competence and knowledge of business itself. It is not possible here to explore the legal phases of this question, but cost accountants should express clearly and unmistakably their judgment with regard to the cost phases of these situations. Administrators in interpreting and applying the law should consult cost accountants on cost problems rather than lawyers unless the lawyers themselves are also competent cost accountants.

The second larger portion of order costs is that known as order filling, divided as between the clerical and what may be called the manual or handling costs. Most clerical costs will be equal per order and can therefore reasonably be averaged over the orders without respect to the volume, size, or number of items on the order. A few of the order filling costs, such as billing pricing, extending, and auditing, may have to be applied on a per line basis for many manufacturers. The individual order in many cases contains relatively few items; consequently, the per-item analysis in more cases becomes really insignificant. The manual operations such as packing goods, weighing, and shipping, may vary somewhat with the size of the order—it is obvious that it costs more to handle a ton than to handle a hundredweight or ten pounds. Certain costs might have been allocated on a tonnage basis or on a per package basis. There are a good many situations where the time involved in filling an order is the same or practically the same for the smallest orders as for the largest orders. The larger orders had more shipping-case packages, and consequently more tonnage to handle, whereas the smaller orders involved broken-case lots and repackaging in lieu of the bulk handling of the larger orders.

It is now possible to illustrate something of the type of information that is being obtained: In making analyses of this sort, where it was possible and expedient to develop a per order cost and where it was found that the selling, clerical, and handling costs were about equal per order irrespective of the size of the order, an approximate selling and order filling cost of $5 per order was found. How will this affect the possible quantity discounts, assuming of course that these were the only differential cost figures that could be ascertained?

One can quite readily observe what happens if a table is set up with one column for the size of the order and one column for the cost of order taking and filling as a per cent of the net sale, as in Table I.

Table I

Differential Order Costs

Size of Order	*Cost to Take and Fill*	*Cost as a Per Cent of Sales*
$ 5.00	$5.00	100.0
10.00	5.00	50.0
15.00	5.00	30.0
25.00	5.00	20.0
50.00	5.00	10.0
100.00	5.00	5.0
200.00	5.00	2.5

Assuming that the salesman takes a $5 order, the cost of taking and filling that order means that the cost is 100%. This of course does not consider the cost of the goods and other selling and administrative expenses. On a $10 order this cost is 50% of the total. On a $20 order it is 25% of the total. On a $50 order it is 10%. On $100, it is 5%. On a $500 order it is 1%. On a $1,000 order it is ½ of 1%. It is evident that cost differentials are greatest on the smaller orders when expressed in terms of selling price. Notice that there is a differential of

50% between a $5 order and a $10 order, the cost having been 100% of the $5 order and 50% of the $10 order. Notice also that a 25% differential exists between the $10 order and the $20 order, and a 20% differential between the $20 order and the $50 order, while between the $50 order and the $100 order there is only a 5% differential, and only a 4% differential between the $100 order and the $500 order. In other words, as the orders increase in size, the cost differentials decline, and the cost curve is obviously a hyperbola. Those who are familiar with quantity discount schedules will recognize that these schedules do not follow a smooth curve; instead, they involve a series of definite steps. Furthermore, the steps are usually larger as one approaches the larger-size order and smaller on the smaller order, following a curve quite different from that of the cost curve. Unquestionably, sales managers in setting up their quantity discount schedules have overlooked this general behavior of costs and have assumed that the differentials on larger orders were much greater than they have in fact turned out to be. In addition they have ignored the fact that the greatest differences in cost in terms of sales are to be found between the smaller orders.

A question also arises concerning the extent to which a manufacturer is justified, let us say, in offering an extra 5% on a $100 order. If it is assumed that, under the conditions just stated, his average order for less than $100 is $50, then it would seem that the 5% differential is just about justified because of the fact that a 5% differential in cost exists between the $50 order and the $100 order. However, if a customer puts in a $90 order he does not get the discount; if he puts in a $100 order, he does. Can the 5% differential then be justified on the basis of savings? It is obvious that it cannot. For a $90 order the cost would be approximately 5½% and on a $100 order it would be 5%. In other words, there is slightly over a ½% differential in cost but actually a 5% differential in price. Thus, it would seem that a scale of discounts set up on a step basis would be hard to justify under any of the cost analyses. Actually, however, analyses of customers' buying reveals the fact that customers tend to bunch their orders at about the lowest possible point of each discount division. For instance, if the discount steps come at the 25, 50, and 100 dollar order points, the average order between 25 and 50 dollars is not $37.50 but about as close to $25 as the customers can make it. That is, it would be $26 or $27; while the average order between 50 and 100 dollars is not $75 but $53 or $54, the assumption being that the customer found it difficult to make his order just an even $50. The $100 orders tend to bunch themselves around $103 or $104. Thus it is not likely that a manufacturer will find himself either in spirit or letter violating the provisions of the Robinson-Patman Law on quantity discounts by the mere fact of establishing discounts by steps as long as these steps are reasonable and as long as the customers are in a position to avail themselves of these discounts according to the scale which they may be reasonably expected to buy.

An important problem arises where under present methods of price control by manufacturers, whether under Fair Trade Laws or under agency agreements, wholesalers or others redistributing the products of a given manufacturer follow the manufacturer's suggested resale prices, prices which may involve the giving of quantity discounts. A wholesaler, as agent or under contract, may be under obligation as a representative of the manufacturer to obey the manufacturer's requirements on quantity discounts offered. These quantity discounts may not be justified on the basis of the wholesaler's own savings by virtue of

his distributing orders of different sizes. It is therefore desirable that manufacturers who distribute through controlled outlets should give this matter serious consideration, and if they follow a policy of price control, they should understand clearly the nature and behavior of their distributors' costs.

These general observations have been confined to the problems of cost analysis by orders. It has not been a systematic presentation, since a comprehensive study of the problem would involve recognition of all possible situations that might arise, and this paper has been confined to a rather narrow set of assumptions and to rather limited interpretations.

It would be well for cost accountants to broaden their ideas and recognize principles of cost analysis that do not develop necessarily out of the study of production costs. Their point of view should be sufficiently flexible to enable them to handle new situations without necessarily being bound by precedent, and they should arrive at the conclusions for the validity of which they can vigorously contend.

By way of conclusion it might be added that the interest in analyses of distribution cost which has been engendered by the passage of the Robinson-Patman Law has brought about considerable interest on the part of manufacturers and wholesalers, particularly with respect to the nature of distribution cost and how these costs are affected by the buying policies of the customers to whom they sell. One fact that this study has brought out conspicuously is that the small customer who does not buy wisely is a very costly customer to serve, and manufacturers and wholesalers in serving these small customers are incurring costs which have to be absorbed in profits of larger customers or customers who buy more intelligently.

The Robinson-Patman Act, though intended primarily to protect the small retailer, has largely resulted in dragging him out into the open as a very expensive and costly unit in the distributive system. It is not merely the small retailer, but the small buyer who forms this costly unit. Some large retailers, for instance, who buy in large quantities from certain distributors or who buy direct, may buy in small quantities from others, and being served in these small quantities, are contributing heavily to the load of distribution costs.

SHALL I BECOME A PUBLIC ACCOUNTANT?

Norman E. Webster

The first question an accounting student should put to himself or herself, is, Why am I thinking of preparing for and of engaging in the practice of public accountancy?

Not many years ago some may have decided upon public accountancy because of the idea that its rewards in money were above the average, in some cases quite exceptional. The advertisements of some correspondence schools have suggested that all accountants were Wallingfords who could get rich quick. Today there is less of that sort of advertising and perhaps fewer persons are being misled by it. But a professional life is not the most promising occupation to one imbued with the ambition of acquiring great wealth. There are notable exceptions in law and medicine, and some other professions. In accountancy

fewer than 25,000 certificates have been issued. Probably there are less than 20,000 CPAs in practice and perhaps two or three times as many who are not certified. The number of those who have accumulated what could be considered as even approximating wealth is very few. Without statistics my guess is that the average income is between two and three thousand dollars per year, which suggests that to acquire wealth one should choose business rather than accountancy as his field of endeavor.

Others may have thought of accounting as offering opportunities for reaching positions of distinction in the community. In politics, at least one CPA has gone to Congress and several have reached the legislatures. Perhaps there have been instances of accountants being elected or appointed to other important governmental positions. But for the positions for which accountants would seem to be especially fitted, the treasureships, the auditorships and the heads of departments of taxation, banking, insurance and the like, the selections of accountants have been very infrequent.

In business, they have fared better. Accountants, like lawyers, though to a less degree, have been chosen for important positions in banks and even more frequently in industrial and other corporations. Though I do not know the facts, I suspect that some of them, like some lawyers I have known who have been lured away from the profession they had chosen, may at times have regretted that they had given up the satisfactions in their profession for the greater monetary rewards of business.

For those who remain in the practice of public accountancy the likelihood of attaining distinction and of becoming known to many outside the profession seems to be quite remote.

Perhaps the most promising road to public recognition of any who prepare for public accountancy is by way of teaching with its attendant lecturing and authorship. Even so, the number who may come to know and to appreciate the abilities of these teachers and their usefulness to the public may be only a small fraction of the community.

However, recognizing that public accountancy is not an avenue to certain wealth or public recognition, perhaps some believe it is the occupation in which they wish to spend their lives because of their special aptitude for it—an aptitude for figures of which we often hear. That is a persuasive reason but it should be considered along with one's other abilities. The private practice of accountancy in business also offers opportunities to those who are versatile in figures. Business has taken many of them and is almost certain to continue to do so, perhaps in a greater proportion. And business has in many cases taken men of ability and given them the opportunity to make successes of their lives, because of that ability and industry, and has tolerated characteristics in manner and address which, would probably have prevented their succeeding in a professional life.

Some persons may have thought of accountancy as a nice, respectable, easy occupation, a white-collar job that would be to their liking. Many times I have quoted from a letter written to his brother by Sir Walter Scott in which in commenting upon the future of one who takes up public accountancy he wrote "whoever is to dedicate himself to them, must look for a long and laborious tract of attention ere he reach the reward of his labours." And this holds true in America as well as in Scotland and England even though their apprenticeship system does not obtain here. The young accountant will almost surely meet with many columns to be added, thousands of footings to be checked, and quantities of uninteresting, dusty vouchers

to be examined. Public accountancy may be a life of white collars, but it is just as certainly one of soiled shirt-sleeves.

But if money and distinction, if aptitude for figures and a liking for white collars are not sufficient reasons for one's deciding upon preparing for and entering upon the practice of public accountancy, what considerations should govern?

It is not reasonable to expect the student who is only on the threshold of his life to make a full and accurate examination of himself, to inventory his individual and peculiarly personal assets and liabilities. Of course, these balance sheet terms furnish only a rough analogy; perhaps it would be better to call them abilities and disabilities, or privileges and duties. These pairs of antonyms are so similar that they might be used interchangeably except that we have become accustomed to restricting each pair to a particular class of things, to property, to personal qualities, to social relations.

Personal characteristics, individual qualities, which to me seem desirable, even essential, for any one planning to enter upon the practice of public accountancy or almost any other profession, include idealism, culture, curiosity, imagination, persistence, self-control.

Idealism is particularly a characteristic of youth. But true professional success requires that this quality must not be lost with the passing of years. It is related to altruism, unselfish labor for others. This does not mean that the accountant's efforts should be unrewarded. On the contrary, in public accountancy as in all other activities the laborer is worthy of his hire. It does mean, however, that the public accountant should not think only or even first of his fee, but rather of service. Young men used to experience a "call" to the ministry. That was not for the salary but for the opportunity for service. The family physician and especially the country doctor does not think of his fee when he responds to a call at night or in a storm. He thinks that here is an opportunity for him to show that he upholds the tradition of his profession. No, he does not even think of that; he merely acts as if he did.

Idealism in public accountancy will inspire the young practitioner, and should compel the old ones also, to give his best in ability, industry, and honesty to his clients who have engaged him, to the public who may be influenced by what he does, to his fellow practitioners in his observance of the golden rule, and to himself. This last actually embraces all the others because, adapting Polonius' advice to Laertes, if to himself he's true, he cannot then be false to any man.

Idealism should be one of the foundation stones upon which to build a professional life. The next stone to be placed in the foundation, and of course that is the place where a fundamental belongs, is culture. The study of commercial law and of the theory and application of accounting and auditing will furnish the superstructure. Culture, in all that the broad term connotes, can alone furnish a firm foundation.

English is, of course, of first importance. By that term I mean not only a study of grammar and rhetoric and a familiarity with the dictionaries, but a wide reading of literature, romance and poetry as well as economics, logic and ethics. "Reading maketh a full man; conference a ready man; and writing an exact man." And because of the cannibalistic character of English in its willingness to take and absorb whatever it likes in other languages, an acquaintance with other modern languages and especially with some Latin and even Greek will add greatly to one's grasp of the mother tongue.

The importance of the study of history should not be overlooked. Practically all statesmen and some politicians have been

students of political history and many of them have been writers on the subject. Blackstone's Commentaries furnishes the legal profession with an exhaustive history tracing the development of the common law and illuminating the subject by showing the social and political conditions out of which the common law had grown. Other professions have had their historians, and students preparing to enter those professions are encouraged or required to become acquainted with their beginnings and growth. Commonly and most naturally, such historical writings have been produced by men who themselves were practitioners of the profession, or were educators who saw the relation of history to training for practice.

That accounting was developed by the monks for the great mercantile cities of Italy is not surprising. In the middle ages the church was the repository of learning and its devotees to a greater degree than others were the thinking men of their time. But secular callings also developed men interested in accounting, if not for itself as a profession, then for the aid which in the past as now it could be to other occupations. Pepys, remembered best for his diary with its indiscrete revelations of his improprieties, was an official of the British Navy Office and tried to introduce accounting as an antidote to dishonesty. Hamilton, our first Secretary of the Treasury, introduced an accounting system for the Federal finances.

History is interesting, fascinating and engrossing and deserves a place in every curriculum and in our general reading. The fact that there is but little in the way of formal history of public accountancy only adds to the pleasure of seeking it in the original sources where it is hidden waiting for present-day students to bring it out.

But the study of history has, in addition to its cultural influence, a practical aspect as well. It trains one to seek all the pertinent facts about a matter, to assort them and to arrange them in their proper relation. That part of the practice of public accountancy which is comprehended in the term auditing calls for exactly the same manner of thinking and working: ascertainment of facts, segregation of them in their relation to each other, exclusion of the unimportant, marshaling the significant ones in logical sequence, not as argument but as history; that is the work of an auditor. At times he may be tempted to indulge in prophecy but that role is outside his province. As auditors we should be content to be historians and if we are good historians we may expect the readers of our reports to do their own prophesying.

This discussion of the importance of cultural education for the practice of public accountancy tempts me to go further with it. As a member of the Board of Certified Public Accountant Examiners, working under the Regents of the University and with the State Education Department it would not be proper for me and I do not mean to criticize their decision that the courses in schools which they will register as satisfactory under the provisions of Section 1498a of Article 57 of the Education Law should be about evenly divided between cultural and technical subjects. On another occasion I said that if I were to advise as to the division of studies in preparation for accountancy, I should propose not to exceed one-quarter in technical studies, and those basic rather than specialized, while I should regret that this would leave only three-quarters of the course for cultural subjects. With that feeling about this matter I urge you all to go on with general study and reading and not to hold so closely and exclusively to the courses in accounting that you get no perspective and cannot see the forest for the trees.

Two qualities which I consider to be fundamental or at least highly important

for the practice of public accountancy are curiosity and imagination. But unless these qualities are kept in hand they may be highly objectionable. I do not advocate curiosity about matters which are none of one's business or an imagination which unrestrained may lead one to state as facts what in reality are only figments of his own mental wanderings.

In public accountancy curiosity should be directed, not primarily toward a person but toward an incident, a transaction of which the accountant desires to learn the whole story, its background, what happened, and what if anything is not shown in the formal record. At this point his imagination may come into play to assist his curiosity. He may wonder if "so-and-so had something to do with the matter, guess that the transaction is related to some other incident the details of which he knows, or imagine that the bookkeeper has misunderstood the oral instructions he received from the person who had handled the matter. None of these answers is conclusive and must not be accepted as such, but they offer suggestions as to how and where he may learn the facts which he is seeking.

Curiosity is the quality which has resulted in the addition to the world's knowledge of all or most of the facts of the natural sciences. Imagination has been a principal factor in invention. And very often the two qualities have worked together. By its derivation the word science means knowledge, and a knowledge of the facts concerning particular matters is what the accountant continually searches for. This knowledge is to be obtained by scientific methods. And since curiosity and imagination have been useful qualities in the search for knowledge in other fields they should be developed and used in the field of accountancy.

Another quality I suggest as fundamental for the practice of public accountancy is persistence. The word is so familiar that it seems not to call for definition; but the scope of its implications should be understood. Like many other words representing positive and continuing qualities it is easier to grasp its meaning by telling what it does not mean. It is the opposite of abandonment or discouragement, or at least it will not permit discouragement to prevail over it. It is a quality which does not admit defeat.

Specifically it will inspire the student to keep on with his studies, both in and out of school. It will drive the junior to continue his tiring and monotonous checking. It will compel the senior to make sure that he obtains all pertinent facts relative to some obscure but possibly important transaction. It will not permit the supervisor to be superficial in his review of the field work which has been brought back to him. And it will prevent the practitioner from giving up when

> In pensive mood once more I wait
> For clients who are slow to come
> Until the idle hours grow late
> And I must turn my steps toward home.

In business if one line of merchandise does not sell satisfactorily, or if one mode of manufacture does not make products of the necessary quality, it may be possible to change the line or to adopt a different mode of production; and then go on to success. But in the practice of public accountancy changes may not be made so easily. Success in accountancy may bring opportunities for entering business whereas failure may find every door closed. There are not many sadder situations than a middle-aged or elderly accountant in distress. Success must be won, for failure is unbearable. "Let not him who putteth his hand to the plow turn back."

Self-control, as a fundamental quality for the practitioner of public accountancy, probably includes the quality of persistence. But persistence describes the ac-

count in his dealings with himself, whereas self-control covers the field of his relations with others. It will have many phases. The young accountant who begins practice as a minor part of a large organization may for a time be subordinate to every other person in it; to have a multitude of bosses is not an easy situation and calls for self-control. Later he will be superior to some, on a par with others, but still subject to the direction of those senior to himself. However, these situations are not unlike those which one meets in business and everyone has met or must meet them all through life.

In a professional career self-control calls for even more: The staff accountant, no matter what his rank is a representative, and at times may be the only representative, of his firm at the office of his client or at some other office if his assignment takes him to such a place. His responsibility here calls for the exercise of a great deal of self-control, far more than may be expected of him in his own office. He must not say what his principals would not wish to say; nor can he remain a mute and by his silence convince those with whom he is dealing that his principals have sent out a "know-nothing."

Dignity without an air of superiority, friendliness without undue intimacy, interest in particular transactions without disclosing to others exceptional curiosity about them, and suspicion without a show of distrust—these are some of the qualities which are embraced in the term self-control. And if the young accountant has them or develops them in his early years as a staff member, they will not fail him in more serious and trying experiences as he rises in the profession.

Besides these fundamental qualities there are others less basic which may have an important bearing on success in the accounting profession. First impressions are often lasting and if they are favorable, a long advance toward success has been made. To some extent the impressions we make on others are within our own control. Impressions are affected among other things by presence, voice and dress.

As to one's presence, he may not control his size or wholly eliminate some peculiarity in face or figure. But one who has some noticeable peculiarity often may counteract its effect in whole or in part. If conspicuous because above the average height he may drill himself into such a restrained manner and movement that he will not be always in evidence. If he has a booming voice—and I once had to discharge an accountant who was objectionable to clients for that reason—he may by thought and care tone it down. There are still many stones on the shore where Demosthenes used them to drill himself into speaking clearly and pleasantly. One can learn not to rush up and speak to a client or his clerks when they are absorbed in something else, and he can learn to introduce clearly the subject about which he wishes to speak rather than leave the clients confused and wondering "what it is all about."

Above all the accountant should use care and good judgment in matters of dress. In the tone of Polonius' advice to Laertes:

> Costly thy raiment as thy purse can buy
> But not expressed in fancy, rich not gaudy;
> For the apparel oft proclaims the man.

And in his *Essay on Man*, Pope in advising as to the use of words, chose dress as the criterion, apparently considering that every one would concede the correctness of his rule as to dress.

> In words as in fashion the same rule will hold
> Alike fantastic if too new or too old;
> Be not the first by whom the new is tried
> Nor yet the last to lay the old aside.

In return for these sacrifices and exertions, what may one who has dedicated his life to public accounting reasonably expect from the profession?

First, he may look forward to a life of hard but interesting work. Along with plenty of routine drudgery he will almost surely have much variety with some spice of surprise. He will meet all sorts of people and most of them will be agreeable; some will develop into personal friends. If he is fairly well adapted to his vocation he will have a happy experience.

He may expect to have a comfortable living. Not wealth, but enough to provide for his family and himself and to permit him to indulge them and himself in some of those cultural phases of life which are the finest things of all.

Beyond these things he will find that he is coming to have a broadening perspective on life. He will have much to think of when alone and will find that these communions with himself following those he has had with his clients and his professional associates will drive him to his books, not only his technical books, but to those of science and general literature.

And at the end, though he will almost surely admit that he has not accomplished all he planned, he should be able to say to himself: I have not run as fast or as steadily as I could, but I have always had my eye on the goal.

CATCHING UP WITH EMPLOYEE FRAUDS

J. S. Seidman

I

Over two hundred million dollars a year is lost to industry through employee frauds. This, however, is only the amount that is ferreted out and made public. There is no telling how much additional is lost either in undetected frauds or those that for one reason or another are hushed.

That the record should contain fraud in such prolific measure is not the exciting feature. Fraud is merely another badge of human failing, though, to be sure, an unpleasant one. The part about these frauds that does cause blush, at least to the cheek of an auditor, is that when the frauds do "pop," it is found that so many of them had been started and blithely going on for long periods of time untouched by auditing pursuit.

Even more damaging is the fact that frequently some of these frauds come to light not as a result of internal control or auditing technique, but wholly out of accidental or adventitious circumstances. Chance, rather than auditing, prevails. This is in no way a disparagement of auditing. Frauds prevented or detected by auditing no doubt by far preponderate over those that elude. The fact is, however, that many frauds have defied the calendar and when at last they came to grief, the apprehender was dogged luck, not science.

In the hope that laboratory dissection and analysis of frauds might, through the development of some new or modified auditing technique, narrow if not eliminate the fortuitous aspects of detection, a case study was undertaken. The study was confined to employee frauds and did not consider skullduggery by employers themselves. For case material, accountants, surety companies, banks, stock brokerage concerns and industrial and commercial organizations were invited to submit details of frauds that were unearthed by "happenstance" rather than by the normal workings of accounting controls.

More than five hundred cases were thus culled out and test-tubed. What is here reported or treated is based solely on that

study. There is no dealing with the academics of fraud, internal control, or auditing; the hard knocks and provocations of actual experience are the auspices under which we proceed.

First, however, a word of caution, or perhaps confession. Some objection was raised to the study—and not without foundation. The objection was really not to the study itself, but rather the nature of the report that might emanate from the study. It was felt that a publicized review of the methodology of the fraud-doer, especially of those instances where there was temporal success in evading auditing barriers, might do more harm in the impetus it would provide for prospective wrongdoers than it would do good in extending the art of policing. That may possibly be one of the reasons why the cupboard is so bare of literature on fraud. One objector was even uneasy about informing accountants on fraud in the light of what the Interstate Hosiery Company case has shown can happen.

Circumspection is of course desirable. On the other hand, it would be an ostrich-like procedure to run away from realities. A piercing spotlight on the path of sinners has always been a good way to bring the path into desuetude. Furthermore, it is feasible to avoid revealing, intimate details of the various cases, and through brief technical description or categories, automatically draw a picture of those details.

The answer to the next question, "so what?" will best emerge if some general phases revealed by the study are first considered. A portrait of the average fraud-doer, what he does and how he manages to get by for a while, will provide orientation for determining where next to go in the matter of fraud prevention or detection.

II

The fraud-doer is generally a man—though fraud is by no means exclusively a masculine machination—about thirty-six, married, has children, owns a car, participates in social and communal work, and is of wholesome convivial habits. He has been in the company's employ over five years and, ironically enough, has advanced to a position of trust by honest endeavor and commendable merit. The defaulter lives anywhere and accupies any position, from watchman to president. Perhaps it is not sheer coincidence that fraud and Freud should sound and be spelled so much alike. Sex and fraud have a fundamental aspect in common—ubiquity.

The "why" of fraud may best be left to the psychiatrist. The "how" is the problem of the accountant. Invariably the method selected is of a character that sooner or later must "out" if restitution is not made in the interim. This fact is easy to explain: The average fraud-doer doesn't intend permanently to default. His objective is merely to "borrow" money and to make good long before his manipulation can be detected. Then again, recent conflagrations to the contrary notwithstanding, in very few cases does the fraud-doer get someone "in" on the peculation, or rely on the collusion of a fellow employee. Not intending to steal, it is natural that he try to keep others from aiding or even knowing of his temporary financial aberrations.

How does he go about it? Generally he takes cash on its way into the company. That is to say, he tampers with money from customers (by the so-called process of lapping), or he makes off with funds the anticipated receipt of which is not usually set up or controlled in the accounts, like recoveries on bad debts, proceeds from sale of scrap, etc.

It is not alone incoming funds that he covets. Lifting funds already in, comes within his ambit too. This he usually does through fake disbursements. His chief re-

positories for faking are petty cash, padded bills and payrolls, and fictitious expenses. Only occasionally does he make off with merchandise and securities. If he is connected with two institutions—his company and a charitable enterprise, for example—he frequently plays the cash or securities of one against the other.

What makes it possible for him to get by? In the last analysis, the answer boils down to auditing failure or man failure. It is both disturbing and heartening to find that none of the cases was of a type that *only* accident could have unearthed. There were no fool-proof or perfect manipulations. The frauds were cloaked for long periods by situations that were correctable or need not have existed.

Accounting technique for fraud prevention or detection pivots around internal control and outside (independent) audit. The cases show that, for the most part, it is internal control that took the count in its combat with fraud. Truth to tell, internal control was never in the ring. It was hopelessly unfit or lackadaisical. In some cases no fault could be found with the system, except a bogging down in the application. An immovable perfect system met an irresistible force of human frailty and fraud was born or nurtured. In some cases the employee had been trained to connive or pilfer *for* his employer and ended up stealing *from* him—a natural sequence, and a background for which few tears need be shed.

Independent audits, the mate, complement and supplement of internal control, also occasionally lent a hand in permitting fraud to thrive. In most instances due provocation is traceable to the niggardly scope of examination. Combine half-baked internal control with a highly limited examination and fraud may go out on a lark.

However, inadequate audit scope alone is not an explanation for some of the cases. A few afforded the auditors all the rope needed but the fraud-doer didn't hang. The auditor, human being that he is, slipped: A momentary let-down, a lapse into perfunctory checking of detail instead of sustainment of imagination or mental agility, and the fraud-doer was free. It is true that auditors are not supposed to be bloodhounds but even so many of the cases should have been apprehended by a reasonably efficient audit.

How may fraud be eliminated, or at least minimized? It is time to reexamine the safeguards furnished by internal controls and independent audit. Since internal control and outside audit are the focal mechanisms for sighting or hedging-in the culprit, we may consider the possible avenues for improvement of the role of each. First, internal control:

III

Reference has been made to the fact that many frauds involve diverting cash at the gateway. Obviously, therefore, the first line of defense is to increase the guard at that liminal point. Excellent for this purpose is the check list. Textbooks have long proclaimed the desirability of having the person who opens the mail, or anyone else not connected with the bookkeeping department, list all checks and securities contained in the mail. Few enterprises, however, have heeded this call.

There is plenty of fussing and fuming when anything goes wrong, but there is stark apathy about palpable means of correction. A small enterprise generally believes that it doesn't have enough personnel to take care of the check-list procedure because the bookkeeper is also the mail opener, and everything else. If the proprietor has any sanctity for his own funds and investment, however, he should establish such safeguards, even to doing the check listing himself if need be.

Arch enigma of internal control is lapping (using funds from one source to cover

up money previously misappropriated from another) and its confreres, exchange transactions and inter-bank transfers. Many a fraud has been committed through the use of these techniques. But all of them can be successfully eliminated by appropriate internal control. The check list is a starter. Independent, however, of the check list, or supplementing it, is another device about which nothing thus far seems to have been said in auditing texts—a *controlled* duplicate deposit slip. Lapping, exchanges and inter-bank manipulations hinge on the disparity between the actual source of a bank deposit and the false source recorded in the accounts. In recognition of this, a procedure calling for bank-stamped duplicate slips is frequently followed.

Even this procedure, however, does not afford any substantial protection. Bank tellers—at least those in large city banks—not only acknowledge, but also insist, that they have all they can do checking the original deposit slip. They stamp the duplicate perfunctorily if the total shown on the duplicate agrees with the original. Some confess that they affix the stamp without even bothering about the totals. They certainly seldom stop to compare the ingredient individual items making up the total. It is therefore clear that a duplicate deposit slip cannot be relied upon as being a precise picture of the original.

Even if the duplicate were a facsimile, or, as is sometimes done, even if a photostat of the original were obtained from the bank, the fraud-doers would still not be under control. This would prevent tampering with individual amounts, but the door would still remain open for attributing false sources to the same amounts. Some lapping and almost all exchange and inter-bank transfers would still be possible; only the plugging of both source and amount can blight the evil.

Here is the type of procedure to accomplish this plugging, wherever feasible: The bookkeeping department prepares a duplicate deposit slip on which is recorded not only the amounts but also their sources and the accounts to be credited. All items intended to be recorded as exchange or inter-bank transfer will thus be marked as such on the duplicate. Before making the deposit, an authorized individual (or in the small unit, the proprietor if need be) not connected with the bookkeeping department is required to compare the cash, checks, etc., to be deposited with the prepared duplicate. The comparison is to be made both as to amounts and description.

Continuing with the procedure, all items marked for exchange or as inter-bank transfer, must be individually and specially approved. (Nothing is permitted to be recorded as exchange or inter-bank transfer without such approval.) The duplicate deposit slip is then initialed by the reviewer and retained for the use of the internal or outside auditor as a check on the recordation of the deposit on the books. The deposit itself need be made only with the original slip and the passbook. A bank-stamped duplicate is unnecessary. It is supplanted by a meaningful controlled duplicate. Unless there be collusion, lapping, or exchange or inter-bank tampering will be effectively prevented.

Having thus soldered some important leaks in incoming funds, what can be done toward preventing fraud that uses fictitious disbursements as its vehicle. Petty cash furnishes a wide field for such peculations; but most of the offenses with petty-cash funds could be prevented if petty-cash disbursements were limited to items of nominal amount, if petty-cash slips were made out in ink, if all figures were spelled out instead of being written in numerals, and if petty-cash slips were cancelled or voided by someone other than the person handling the petty cash, immediately after the check in reimbursement of

the fund were signed but before the slips got back to the one in charge of the petty cash.

Such a program would mark the death knell of tinkering with the amounts on petty-cash slips, dampen the possibilities of duplication, and, in any event, minimize the size of items that can go through petty cash in the first instance. A further check could be added if the bookkeeping for petty cash were divorced in terms of personnel from the one handling the petty cash itself.

Padded payrolls are next on the list. Intrinsically they represent the difference between what is drawn and what is actually paid out for payroll. The difference can frequently be eliminated by separating the functions of making up the payroll, filling in the payroll envelopes, and paying off the help, so that no individual does more than one of these tasks. In addition, the help should sign for the amount they receive. Payment by check will accomplish the desired end without the tripartite separation, but then endorsements must be carefully reviewed and compared with specimen signatures of the employees.

VI

Many frauds are keyed to the substitution, alteration or misappropriation of checks generally in connection with fictitious purchase bills. What happens is that under one guise or another, the signature to a check is procured and the check then comes into the hands of the erring employee, for better or for worse—and of course it is for worse. To the extent that the process depends on the check coming into the defaulter's hands, an effective stop-gap can usually be interposed if a procedural rule of internal control is observed whereby checks are released for mailing directly from the office of the signing individual.

Under no circumstances should signed checks in payment of bills get into the hands of the bookkeeping department. The mail clerk should be under strict instruction that hold-ups on the release of checks can only develop by direction of the office of the signing individual, and never at the instance of a bookkeeper. If vouchers or other supporting documents accompanied the check when it was submitted for signature, the office of the signing individual can detach these papers and send them back to the bookkeeping department. The check, however, should proceed directly to the mails. With such a course of handling, an otherwise fertile avenue of check-manipulation will be closed to the fraud-doers.

As a sequel to controlling the check release, or even independent of it, some form of control of the checks as they come back from the bank as part of the bank statement is necessary. Some types of fraud require check substitution and tampering to rectify the bank statements. Fraud in this direction can thus be anticipated if the routine is such that the bank sends the statement directly to an executive independent of the bookkeeping department, and even to his personal address, to insure inaccessibility of the statement to the bookkeeping department. The office of the independent auditor can also supply a convenient mailing destination for bank statements.

Furthermore, the bank statement should be released to the bookkeeping department only after reconciliation has been effected, and—this is cardinal—the reconciliation should be made by someone wholly removed from the underlying bookkeeping processes.

Budgets and standards furnish another means of control. Though staunch within their own right, budgets and standards have a way of howling every time planned costs are topped by recorded costs. If the difference results in substantial measure

from padding, the introspection set off by budgets and standards is likely to become a give-away. Fraud, therefore, does not look kindly on budgets and standards, which, of course, is an excellent boost for budgets and standards, wholly apart from their value in their immediate field.

Securities are not actively in the industrial fraud limelight. But even the little that does arise could probably be forestalled if securities were put in registered form wherever possible, and if tabs were kept on security numbers, and if access to the vault required the presence of at least two people.

In the case of merchandise, considerable barrier will be placed on looting if inventory is physically taken by employees other than the regular custodians of the merchandise.

Thus far, specific features of internal control have been considered for certain focalized niches. Common to all aspects of internal control is the approval of the reviewing executive on bills, payrolls, vouchers, special entries, etc. If the reviews are made inattentively and the approvals are affixed in robot fashion, all pretense of internal control should be swept aside. It would be more realistic to hand to an employee bent on fraud, a key to the treasury. It is sheer nonsense to require two signatures on a check if either one is placed there in advance or blindly follows as a result of the other. It is a perversion of fiduciary relationship to one's employer if approvals are considered as red tape and a nuisance, or if they are disposed of in a listless, routine manner.

The smaller the company, the greater the violence to any semblance of control when approvals are a soporific process. The reason is obvious. The smaller the company, the more the approvals become the sole basis for reliance. To have faith in one's employees or fellow-employees, may be a sound emotional or spiritual pattern. It will certainly save time and energy. But it is necessary to recognize that aligned with such faith there is constant danger of inducement to fraud. There is a positive correlation between the amount of trust that is reposed in an employee and the opportunities for fraud. A long step forward in fraud prevention will be achieved if individuals charged with review and approval regard these functions as an affirmative essential step in the conservation process, instead of as an unwelcome formalism that is tackled when one is mentally garbed for blind-man's buff.

Even then, when control machinery is geared to perfection, the ideal at all times is to have no actual need for the defensive armament. Erasers are on pencils because people make mistakes. However, some people are constitutionally patterned to make fewer mistakes than others. So also with fraud. We need controls because humans do wander from the straight and narrow. But some humans are more allergic to detours than others. Quality and caliber of the personnel, therefore, become more vital factors than the procedural paths by which the personnel is circumscribed.

An ounce of care in the selection and training of the proper personnel is worth a tone of ritualistic internal control. To put it another way, the essence of control is in the functioning of a personnel department. Before anyone is employed, careful study must be made of the moral fabric and hazard as revealed by the past and as manifested by the occasion for financial temptation. The outside activities of an applicant or employee, the mode of living, financial stresses and strains, etc., all require careful and continuous surveillance and appraisal. If the tests in these respects show negative, the foundation for internal control is ipso facto positive.

The discussion of improved internal con-

trol may be concluded in this way: Procedure abounds to corner the rabbit at every turn. True, observance of the procedure takes time and involves cost. These must be related to the risks entailed if there is no control mechanism. If management concludes to go without, it must recognize consequent possibilities and is presumably prepared for them.

Bonding of employees is a solution reached in many instances in mollification of any untoward blow, or as less costly than the internal control machinery that would be needed. Bonding is also of advantage for other reasons. The investigations made by the surety companies about employees to be bonded are frequently of great assistance in regard to the personnel factor previously described. Furthermore, would-be defaulters are no doubt seriously disturbed, if not deterred, by the knowledge that they may have an unflinching surety company to reckon with.

However, employers must recognize that financial recoupment under a bond can come about only if there can be assurance that fraud will be discovered, the losses disclosed, and their amount proven. The bond obviously has no significance if there is no control procedure to bring fraud to light, or establish its amount. The bonding companies themselves are apprehensive on that score and generally refuse to write a policy unless they feel that the accounting methods and procedures followed are such as to make possible proof of loss without wrangling. Some of the companies even make a critical survey of the employer's accounting and control setup and offer recommendations for improvement. At all events, the point is that a bond must be implemented by accounting weather vanes and thermometers, if the bond is to have its full value.

V

Attention may now be devoted to the outside or independent audit. How can a reorientation in auditing procedures help in the prevention of fraud? The study provoked a number of possibilities in this respect.

Formerly, audits were surprise affairs. In fact, surprise was considered an inherent element of an audit. Today this is no longer true. The cases show that a genuine surprise approach would have caught many a manipulator red-handed. Let us go back to first principles. Let us salvage the value of surprise check-ups. An excellent opportunity for this is afforded in bring-up work. Let us avail ourselves of it. Surprises include not only the time when auditors get started but what audit step they start with. If cash is the conventional beginning point, then ever so often receivables can be tackled first, or some other phase. Auditors must not be taken for granted in their procedures, if they are to prevent employees from planning "around" the audit.

Control over lapping from the standpoint of the internal affairs of a company has been considered. Audits, too, have a vital role in curbing this process. Not only that, but the same audit procedure that can put lapping on the spot, will also serve to waylay kiting and check substitutions. The procedure is this: In the first place, bank deposits should be checked to controlled duplicate deposit slips. If there be no such slips, the next best thing, wherever feasible, is the original slip or its photostat procured from the bank. (We have already indicated why the bank-stamped duplicate lacks stamina for audit purposes.)

The second step, of coördinate rank with the first, is the review of the bank statement for the month immediately succeeding the one that terminates the audit period. The need for this ex post facto review is, among other things, to see whether interbank checks that cleared in the period

following the one under audit may have been furtively used in the last deposits of the audit period, as a cover for lapping. This can be unearthed by reference to the date interbank checks cleared and were charged on the bank statement. If the normal time span for deposit and clearance is allowed for, the date the check was actually deposited can be computed. If this brings the deposit date within the audit period and no such deposit is shown, the lapper is caught.

Equally disturbing to the lapper, and significant for many other reasons, is the verification of customers' balances by direct communication from the auditor. Three features now conspire to undermine some of the value of this step: One is the possibility of tampering with addresses so that the verification never gets to the customer. Where that obstacle is avoided, the indifference or lethargy of the recipient can prevent detection. Finally, even in the hands of an attentive recipient, differences are frequently taken up and disposed of with the bookkeeping department of the client, and the needed independent control is thus destroyed.

Addresses are a matter of internal control. Addressing of the envelopes or the preparation of address plates should always be outside the reaches of the bookkeeping department. The other two phases are primarily a matter of educating business men. For their own reciprocal good, attention to one another's verification requests must be diligently made the order of the day. Furthermore, they must understand the importance of taking up differences only with the auditors, and under no circumstances with the auditor's client.

Auditors can aid in the process if their verification letters make a specific exhortation about steering clear of the client's personnel. Certainly a verification should be regarded as a nullity, and second requests forwarded, when a verification that should be coming from an outsider comes instead from the client's office.

Fraud frequently lurks in the so-called nonledger asset. The bookkeeper pockets recoveries on bad debts, or interest on overdue receivables, or proceeds from the sale of waste, etc. From an auditing standpoint, control may frequently be applied by listing the various categories of such nonledger items and recording on the list the amounts that the books show have been received. The submission of the list to the individuals who should know about the respective items may touch off mnemonic sparks that will result in fruitful inquiry.

In the larger concern, only a staunch memory will do the trick. To overcome this, clues will generally be derived from other forms of internal control that the larger concern is likely to have, such as shipping and receiving records, claim files, check lists, etc. In a detailed audit, these documentary aids would be fine pointers to the occasion for the receipt of nonledger funds. In the smaller concern, the owners or executive employees are likely to have a better mental set of books than physical, and memory will go far in detecting omissions, if regularly tapped as part of internal control. The recommended approach is negative but none the less valuable.

The fraud cases also show that auditors need to be reminded on occasions about the following: Adding machine tapes are worthless unless run off by the auditors. Nonprint and nonadd devices make possible all sorts of disparity between the indicated total and the actual one. Balanced items may establish an arithmetic calm, but may also be the hideout of vicious fraud storms. No matter how small the amounts are, no matter how placid the occasion may appear, entries on one side balanced by entries on another, where both are unnatural, should excite suspi-

cion. In the same vein, erasures and slight irregularities should cause an auditor to sit up and take notice until he is fully satisfied.

Finally, if as a matter of internal control, business men learn that trusted employees still require control—perhaps because they are trusted—then it follows that auditors too should look upon trusted employees with a grain of skepticism. A better way of putting it is that auditing flourishes where auditors look upon people and transactions through the eyes of auditors. Faith and credence must be reposed somewhere and on someone, to be sure. However, this involves the faith of auditors, groomed by the experience of auditing, rather than the "faith of our fathers."

The subject of rotation of auditors was catapulted to the fore because of recent pyrotechnics. Viewed from the objective of fraud detection, rotation of auditing firms or members of the staff of the same auditing firm has its advantages and disadvantages. A new auditor, like a new broom, will make a clean sweep and can pick up things not caught by the predecessor. However, many times frauds are brought to light only because of the thorough familiarity by the auditor with the company's affairs and its personnel and by piecing together things from one examination to the other. An increased use of surprise by new auditors may go much further in creating an impasse for employee frauds.

However, the sina qua non of audit effectiveness revolves not about procedures, but about the personal traits of the auditor. Bereft of alertness or imagination, all the procedures in the world may be unavailing. It is the auditor that makes the audit. Audit performance rises only to the mental level of the auditor, not to the comprehensiveness of the audit program. "It ain't what we do, but the way we do it."

The auditor must be sensitive to the scent of fraud. He cannot afford to pass by, as being without significance, the fact that records may be in a chaotic condition, or not up to date, or in charge of one person. Over-anxiety by the bookkeeper to assist in the audit, or the opposite extreme of resentment on the part of the bookkeeper of the interference caused by an audit, may all be perfectly innocent—but should bear investigation. That is where the sixth sense of auditing enters. Along the same keel would be subtle bookeeping faux pas like the following: Secrecy on the part of the bookkeeper, refusal to take a vacation, records missing or under lock and key while the bookkeeper is away, failure to produce required documents promptly, many alterations, erasures or different color inks, etc.

The ideal is to become magnetized by an auditing electric eye that is actuated by the tiniest possibility of fraud. Nothing is better training for such an ideal than to infuse life into an audit program through sustained mental agility, independence, and effectiveness. As a working guide, the auditor must continuously put before himself this question: If I were the client's employee and wanted to get away with everything possible, overt and covert, how could I best go about it? Whatever answer he gives himself supplies the cue for the examination, in check on whether an employee did not in fact beat the auditor (and the client) to it. That is of course on the assumption that the auditor is engaged for such an examination and the client is willing to pay for it. Both the auditor and the client must become aware of the pitfalls of audits of lesser scope.

VI

And when internal control and external audit have expanded as far as they can, will employee frauds become extinct? No. There will be no extirpation of fraud until

the human being is *really* molded in the image of God, and virtue is triumphant. However, laudable strides will have been made and fraud will be undoubtedly greatly reduced.

Auditing has shown sufficient plasticity and progress to justify the anticipation that the pickings of fraud-doers will daily get leaner and leaner. Unflinching introspection, such as is made possible by a case study, will be one of the laboratory methods of leading auditing to the promised land.

THE ANNUITY METHOD OF ESTIMATING DEPRECIATION

MAURICE MOONITZ AND E. CARY BROWN

IN THE past, charges have been leveled at the annuity method of estimating depreciation, some so serious as to have completely removed it from both formal and practical consideration. These contentions will be discussed in this paper, and in this process will be elucidated what is believed to be a more general annuity method than that ordinarily used. The criticisms with which this paper will be concerned are:

1. Imputed interest on the fixed output asset is included in the cost of production.
2. Each year's stream of revenues is assumed to be the same.
3. An arbitrary rate is used.
4. Difficulty of application is too great.

I

Imputed interest on the fixed output asset is included in the cost of production.

This belief arises from the contention that not only is the cost of the asset written off, but also interest on the asset. Because a rate is applied to the asset to show its growth during an accounting period as it approaches one period closer to its stream of net revenues, the suspicion is immediately aroused that this must be interest. In order that the validity of this contention can be examined, investigation must first be made as to what rate is pertinent to the annuity method.

A. *The rate of interest and the anticipated yield of an output asset.* The distinction between the rate of interest and the anticipated yield of an output asset has important consequences for accounting theory.[1]

When a firm is deciding to increase its investment, it must make a decision as to whether it will buy an individual's (or firm's) debt or an output asset (inventories or more fixed types—machines, tools, plant, etc.). The first type of transaction will be referred to as a *financial transaction*, since, in this case, money is being given up in exchange for a promise to pay at a specified future time. The reward secured for parting with this money is interest, and is involved only in financial transactions.[2]

In deciding whether to purchase an out-

[1] Economists dealing with the theory of investment and employment have clearly distinguished between these two phenomena. *Cf.* J. M. Keynes, *General Theory of Employment, Interest and Money* and discussion surrounding it, particularly Bertil Ohlin, "Some Notes on the Stockholm Theory of Savings and Investment, Part II," *Economic Journal*, June, 1937.

[2] ". . . the rate of interest is the reward for parting with liquidity for a specified period . . . it is, in itself, nothing more than the inverse proportion between a sum of money and what can be obtained for parting with control over the money in exchange for a debt for a stated period of time." J. M. Keynes, *op. cit.*, p. 167. "Interest . . . is . . . the payment for use of money in terms of time . . . " W. A. Paton, *Essentials of Accounting*, p. 439. See also J. R. Hicks, *Value and Capital*, chap. XI.

put asset or a debt, the firm must estimate the net revenues which it expects to derive from its use of the additional output asset, in coöperation with its existing technical equipment.[3] If the expected revenue, taken in conjunction with the cost of the output asset, yields a return greater than that which could be secured by the purchase of a debt (interest), the firm will buy the output asset[4]—an output transaction.[5] Looked at in in another way—assuming that the firm borrowed and invested, it would invest until the cost of investing (interest expense) was equal to the expected net return from the investment. The firm would continue to invest until the anticipated net revenue from the last output asset added was equal to the expected net return from the investment. The firm would continue to invest until the anticipated net revenue from the last output asset added was equal to the rate of interest.[6] At this position the firm would be in equilibrium, as it would be a matter of indifference whether or not an additional output asset was secured. Furthermore, under rational entrepreneurship and freedom of entry of firms, this position would be approximated.[7] Since this is not the general case (there is no necessary reason why the rate of interest should be equal to the net anticipated yield of the last asset added), disequilibrium is of most use to accounting theory.

B. *Depreciation*. Without indulging in the manifold discussions concerning the meaning of depreciation, the sense in which it will here be used shall be made clear at the outset. The fixed output asset can be likened to an annuity, the latter yielding a fixed money return over a period of years, while the former yields services upon which a money value is placed. As these services are used up (or their availability for a given period is lost) the asset declines in value, since there are fewer services left in the future. This decline in value we shall term depreciation.[8]

C. *An Illustration*. Let us, for a moment examine a fanciful case in order to see more clearly the rate involved in the annuity method. The following assumptions are made: (1) an individual has the prospect of leasing a petrified forest for a period of five years; (2) the forest is completely fenced, entry being effected only by coin in an automatic gate (hence no labor cost); (3) upkeep of the forest's equipment is taken care of by the lessor; and (4) the tourists come at the end of the year. The cost of the leasehold is $4451.82 which must be paid at the beginning of the term of the leasehold. The individual can borrow from the bank for five years, paying back the debt in five equal annual instalments with interest compounded annually at the rate of 4% per year. He also anticipates a net revenue of $1115.00

[3] The anticipated net revenue from the marginal asset as compared with its cost has been called, in economic theory, the marginal efficiency of capital. ". . . I define the marginal efficiency of capital as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price." J. M. Keynes, *op. cit.*, p. 135. Oskar Lange, in his paper on "The Rate of Interest and the Optimum Propensity to Consume," *Economica*, Feb., 1938, distinguishes between the marginal efficiency of investment and the marginal efficiency of capital. The latter refers to the last asset-unit to be added and will be more important for use in this paper. In general, however, the last dollar to be added has greater significance.

[4] The element of risk is being disregarded here, as it will be throughout this paper. If risk were present an additional premium would be necessary in order to compensate for it.

[5] An output transaction is the purchase of an output asset and its transformation into finished product.

[6] By the rate of interest is meant the appropriate rate corresponding to the length of life of the asset in question.

[7] Freedom of entry would mean, in this case, that there was nothing preventing the firm from procuring as much funds as it needed in order to secure the additional stream of net revenues. There are institutional reasons why this may not be true.

[8] H. R. Hatfield, *Accounting*, pp. 130–31. The growth in the value of the asset as it approaches one period closer to the series of net receipts, is not an offset to the depreciation, but rather the manifestation of the anticipated yield of the output asset. This increase arises because of the discreteness of the receipts, and would disappear if discounting could be done continuously.

per year for the five years. Hence his view of the asset is as follows:

	Net Revenues	$1115.00	$1115.00	$1115.00	$1115.00	$1115.00
Cost = $4451.82	Years	1	2	3	4	5

The rate of return over cost given by these anticipated revenues would be:

$$\$4451.82 = \$1115.00 \left[\frac{1 - \dfrac{1}{(1+e)^5}}{e} \right].$$

$$e = 8\%^{9}$$

Hence, as he has no money to invest, it would pay him to borrow and buy the leasehold at any rate of interest up to 8% (provided this investment opportunity yielded the highest rate of return in excess of the market rate of interest of all alternatives open to him). Thus he borrows the money and buys the leasehold.

Assuming his expectations to be fulfilled, the accounts for the five years would appear.[10]

Fixed Output Asset

(2) $4451.82 (3) 356.16	$1115.00 (4)
Bal. 3692.97 (8) 295.44	1115.00 (9)
Bal. 2873.41 (13) 229.87	1115.00 (14)
Bal. 1988.28 (18) 159.06	1115.00 (19)
Bal. 1032.34 (23) 82.66	1115.00 (24)
$1115.00	$1115.00

Cash

(1) $4451.82 (5) 1115.00	$4451.82 (2) 1000.00 (7)
Bal. 115.00 (10) 1115.00	1000.00 (12)
Bal. 230.00 (15) 1115.00	1000.00 (17)
Bal. 345.00 (20) 1115.00	1000.00 (22)
Bal. 460.00 (25) 1115.00	1000.00 (27)
Bal. $ 575.00	

Net Worth

(4) $1115.00 (6) 178.07	$ 356.15 (3) 1115.00 (5)
(9) 1115.00 (11) 145.20	178.07 Bal. 295.44 (8) 1115.00 (10)
(14) 1115.00 (16) 111.00	328.32 Bal. 229.87 (13) 1115.00 (15)
(19) 1115.00 (21) 75.44	447.19 Bal. 159.06 (18) 1115.00 (20)
(24) 1115.00 (26) 38.47	530.81 Bal. 82.66 (23 1115.00 (25))
	$575.00 Bal.

Liability

(7) $1000.00	$4451.82 (1) 178.07 (6)
(12) 1000.00	3629.89 Bal. 145.20 (11)
(17) 1000.00	2775.09 Bal. 111.00 (16)
(22) 1000.00	1886.09 Bal. 75.44 (21)
(27) 1000.00	961.53 Bal. 38.47 (26)
$1000.00	$1000.00

The important consequence of the presentation above is that the market rate of interest is not the rate which is used in calculating depreciation under the annuity method. Rather, it is the *anticipated* rate of return which was in the mind of the buyer when he decided to purchase the asset. It may or may not be equal to the market rate of interest, the latter only being useful in determining for the buyer whether he should borrow and invest.

Use will be made of this illustration in the next section. Here it has proved that the contention concerning inclusion of imputed interest is unfounded. The credit to net worth[11] has to do with the return on the marginal asset, not the yield of a claim. The amount of depreciation is dependent upon the prospective stream of net revenues, not upon a supposed imputation of interest. Once the anticipated stream of net revenues is determined, depreciation cannot be changed under any method of estimation—it is a fact.

[9] In order to differentiate between the rate of interest and the marginal yield of an asset *e* is being used rather than *i*.

[10] Explanation of entries: (1) money borrowed; (2) output asset acquired; (3), (8), (13), (18), (23) increase in value of asset at 8% as it approaches one year closer the series of prospective net revenues; (4), (9), (14), (19), (24) depreciation of asset with prospect of revenues within that period being gone; (5), (10), (15), (20), (25) revenues for period; (6), (11), (16), (21), (26) increase in debt (accrued interest) at 4%; (7), (12), (17), (22), (27) instalment on debt paid.

[11] Ordinarily this credit to net worth has been termed *interest income*. As was pointed out in the previous section, this is inappropriate since interest arises only in financial transactions, and depreciation (the using up of an output asset) involves an output transaction. The suggestion is made that to be more realistic the term *anticipated return realized* or some such title be used.

II

The general annuity method of estimating depreciation.

The general annuity method was hinted at in the previous example, but will be seen more clearly if the results secured there are compared with the results under the special annuity method.

Had the market rate of interest been used, the series in the mind of the purchaser would have been entirely disregarded. It would have been assumed to appear:

Cost = $4451.82	Net Revenues	$1000.00	$1000.00	$1000.00	$1000.00	$1000.00
	Years	1	2	3	4	5

The accounts would have shown (using the same sequence as in the previous example):

Fixed Output Asset

(2) $4451.82 (3) 178.07	$1000.00 (4)
Bal. 3629.89 (8) 145.20	1000.00 (9)
Bal. 2775.09 (13) 111.00	1000.00 (14)
Bal. 1886.09 (18) 75.44	1000.00 (19)
Bal. 961.53 (23) 38.47	1000.00 (24)
$1000.00	$1000.00

Cash

(1) $4451.82 (5) 1115.00	$4451.82 (2) 1000.00 (7)
Bal. 115.00 (10) 1115.00	1000.00 (12)
Bal. 230.00 (15) 1115.00	1000.00 (17)
Bal. 345.00 (20) 1115.00	1000.00 (22)
Bal. 460.00 (25) 1115.00	1000.00 (27)
Bal. $575.00	

Net Worth

(4) $1000.00 (6) 178.07	$ 178.07 (3) 1115.00 (5)
(9) 1000.00 (11) 145.20	115.00 Bal. 145.20 (8) 1115.00 (10)
(14) 1000.00 (16) 111.00	230.00 Bal. 111.00 (13) 1115.00 (15)
(19) 1000.00 (21) 75.44	345.00 Bal. 75.44 (18) 1115.00 (20)
(24) 1000.00 (26) 38.47	460.00 Bal. 38.47 (23) 1115.00 (25)
	$ 575.00 Bal.

Liability

(7) $1000.00	$4451.82 (1) 178.07 (6)
(12) 1000.00	3629.89 Bal. 145.20 (11)
(7) 1000.00	2775.09 Bal. 111.00 (16)
(22) 1000.00	1886.09 Bal. 75.44 (21)
(27) 1000.00	961.53 Bal. 38.47 (26)
$1000.00	$1000.00

Now, since the total increase in net worth over the whole period comes out the same under both methods, it may seem that there is little here worth discussing. However, the large differences found under the two methods will be brought out by comparison of income sheets for the periods under consideration. Not only that but since one of the major problems in accounting is getting the right change (as nearly as can be ascertained) in net worth in each period, it is not a matter of indifference which method is used.

As is clearly seen, the special authority method does not disclose the essential fact that the asset is earning an 8% return over cost *in each year*. Also, the depreciation is actually understated unless the general annuity method is used. These reasons certainly, should be sufficiently important to condemn the use of the more limited method.[12]

[12] Had the straight line method been used in the case in question, the following pattern would have been assumed to have appeared:

Cost = $4451.82	Net Revenues	$890.36	$890.36	$890.36	$890.36	$890.36
	Years	1	2	3	4	5

$$\$4451.82 = \$890.36\left[\frac{1-\dfrac{1}{(1+e)^5}}{e}\right]. \qquad e=0\%$$

It is found that the straight line method is only applicable in cases in which the yield of an output asset is zero—or only in cases in which the entrepreneur would not have invested.

INCOME SHEET USING ACTUAL ESTIMATED YIELD

Years	*1*	*2*	*3*	*4*	*5*	*Total*
Revenues	$1115.00	$1115.00	$ 1115.00	$1115.00	$1115.00	$5575.00
Depreciation	−1115.00	−1115.00	−1115.00	−1115.00	−1115.00	−5575.00
Anticipated Yield Realized[12]	+ 356.15	+ 295.44	+ 229.87	+ 159.06	+ 82.66	+1123.18
Net Operating Revenue	356.15	295.44	229.87	159.06	82.66	+1123.18
Interest Charges	178.07	145.20	111.00	75.44	38.47	548.18
Net Profit	$178.08	$150.24	$118.87	$ 82.62	$43.19	$575.00

INCOME SHEET USING MARKET RATE OF INTEREST AS ESTIMATED YIELD

Years	*1*	*2*	*3*	*4*	*5*	*Total*
Revenues	$1115.00	$1115.00	$1115.00	$1115.00	$1115.00	$5575.00
Depreciation	−1000.00	−1000.00	−1000.00	−1000.00	−1000.00	−5000.00
Anticipated Yield Realized	+ 178.07	+ 145.20	+ 111.00	+ 75.44	+ 38.47	+ 548.18
Net Operating Revenue	293.07	260.20	226.00	190.44	153.47	+1123.18
Interest Charges	178.07	145.20	111.00	75.44	38.47	548.18
Net Profit	$ 115.00	$ 115.00	$ 115.00	$ 115.00	$ 115.00	$ 575.00

	General Method	Special Method
Total Revenues	$5575.00	$5575.00
Anticipated Yield Realized	1123.18	548.18
	4451.82	5026.82
Less Profit Shown by Understating Depreciation	—	575.00
Original Cost or Supply Price	$4451.82	$4451.82

The formula with which we have been working was only useful in solving the illustration's rate of return. The generalized formula would be:[13]

$$C=R\left[\frac{1=\dfrac{1}{(1+e)^n}}{e}\right]$$

C = cost of fixed output asset
R = anticipated net revenues to be derived each period
e = rate of discount which equates cost and prospective net revenues (anticipated yield)

This formula does not necessarily show the present value of the asset, since it simply equates cost with anticipated net revenues. Only under the very limited assumption of equilibrium, when anticipated rate of return and the market rate of interest coincide would this be true. The present value could be found by substituting the interest rate for the marginal rate of return.

$$PV=R\left[\frac{1-\dfrac{1}{(1+i)^n}}{i}\right].$$

The choice to be faced is thus between showing present values or cost. If present value were shown either directly in the asset account or in a master valuation account (Canning's good will), it would

[13] Scrap value is being left out of consideration. This can easily be handled simply by treating the scrap as an additional revenue, coming n years away. If S = scrap value, then the equation becomes:

$$C=R\left[\frac{1-\dfrac{1}{(1+e)^n}}{e}\right]+\frac{S}{(1+e)^n}.$$

necessitate writing both the asset and the valuation account off, using a discount rate equal to the ruling rate of interest. Even more—if the anticipated rate of return is in excess of the market rate, there is a necessity that this be done, if the special annuity method is used, in order for depreciation for the period to be correct. The general method gains in that it has the right charge to the income sheet without the necessity of inflating asset values.[14]

III

A. *Each year's stream of revenues is assumed to be the same.* As has been seen, other methods of depreciation are merely special cases of the more general annuity method. Hence, although it does complicate the solution, any series of net revenues can be used. There is no need that they be assumed equal. Cost would then be equated with a more complex series of discounted revenues.

B. *An arbitrary rate is used.* Probably by arbitrary is meant non-contractual, as distinct from the case of a debt or claim which has a specified rate in the contract. The arbitrariness (if such there be) is not in the rate of discount which is used. From the original definition of the yield of the additional output asset (or marginal efficiency of capital) it was shown that it was the stream of net revenues which must be estimated. When a satisfactory stream has been arrived at by the entrepreneur, the rate of discount is automatically established, which may or may not be equal to the market rate of interest. If critics of the special annuity method mean arbitrary in the sense that the firm and industry are assumed to be in equilibrium, their criticism is justified, as this is true only in the special case.[15]

C. *Difficulty of application is too great.* The question involved is whether or not it is desirable to get the depreciation for the period right (or as closely as possible). There should be no disagreement with the opinion that this is an aspect of the goal toward which accounting is striving. The simplified case which was studied, though an abstraction, has yielded results. The straight line method as was seen was the farthest removed from what the actual charge to depreciation should have been. Also it was smallest as compared to the actual depreciation, hence the least conservative. The special annuity method was a closer approximation, but was still below the actual depreciation. From this point of view, then, there are grounds for believing the general annuity method to yield fruitful results.

As far as the calculation is concerned—whatever method is used, something is being said about the anticipated stream of net revenues. In other words, their valuation cannot be avoided by any method of estimating depreciation. Since there is little difference as far as arithmetic is concerned, it would seem wisest to use that method most proximate to the facts. Clearly, on these grounds, the straightline method and the special annuity method must be discarded.

[14] This raises a very interesting point which cannot here be pursued. A balance sheet can tell us little of a firm's financial position. If two firms have an identical asset, one firm discounting the future at 10%. the asset will mean a very different thing than it will to the other firm which discount's the future at 4%.

[15] If the market rate of interest is used in order to determine the stream of revenues, as is commonly done, the objection could still be made that the whole question is being begged by the assumption of the market rate of interest being equal to the anticipated yield. This can be overcome by using a valuation account which will also be written off in the same way so as to show the decline in value of the excess revenues. This loses the advantage of the method shown above in that it necessitates putting asset values in excess of cost on the books.

THE ACCOUNTING EXCHANGE

The Accountancy Profession in Japan

It was in May, 1921, that the Nippon Kwaikeishi Kwai (Japanese Society of Public Accountants) was first formed with a very limited number of members. The first professional accounting organization in Japan, it was merely a private body at the time of its formation. However, the society was incorporated in November, 1922, in accordance with Mimpo, the civil law covering incorporation of such organizations. Although a few other societies of accountants did exist in the country at that time they were rather small and inconsequential.

Many years before the Japanese Society of Public Accountants was formed, a bill to regulate the profession and to register accountants had been placed before the House of Representatives. The bill was introduced eight times in the Japanese Diet from 1914 to 1927, when a law, named "Keirishi-ho" (Accountants' Law), was passed and put into force in September of that year. By the terms of the law all registered accountants are called "Keirishi." It should be remembered, however, that under the law registration is optional; but nonregistered accountants are not influential and their number is very small. The registered accountants (Keirishi), on the other hand, are much more numerous. At the end of June, 1939, there were 8,994 registrations, although most of them are not practicing accountants.

Anyone desiring to become "Keirishi" must possess the following qualifications according to the law:

Article 1. He must be a Japanese subject, or a national of a foreign country designated by a Competent Minister. In addition, he must possess certain minimum technical qualifications required under private law.

Article 2. He must have passed the examination for Keirishi.

Following are the important regulations in the Ordinance for the Enforcement of the Accountants' Law as far as the examination is concerned:—

Art. 5. Only persons coming within the purview of one of the following sections may sit for examinations (for accountants), namely:

(1) Those who have graduated from a Middle School;
(2) Those who have been found by the Minister of Education to possess, in regard to common (general) education, attainments the same as, or higher than, the graduates of a Middle School;
(3) Those who have graduated from schools abroad which are considered by the Committee for Examinations for Accountants to be of a grade the same as or higher than a Middle School in regard to common (general) education;
(4) Apart from those mentioned in the foregoing sections, those who are deemed by the Minister of Education to possess an attainment the same as or higher than the graduates of a Middle School respecting Japanese and Chinese literature, history, geography, mathematics, physics, chemistry and a foreign language (English, French, or German).

Art. 9. Examinations shall be both written and oral. The oral examination may only be taken by those who have passed the written examination.

Art. 10. The written examination shall cover the following subjects:

(1) Accountancy;
(2) Bookkeeping;
(3) Commercial Mathematics;
(4) Science of Commerce;
(5) Economics;
(6) The Civil Code and the Commercial Code.

The foregoing subjects are obligatory.

Persons examined shall be required to elect one of the following subjects in advance:

(1) Economic Policies (Commercial and Industrial Policies);
(2) Currency and Banking;
(3) Science and Merchandise;
(4) Science of Commercial and Industrial Management;

(5) Science of Finance;
(6) Bankruptcy Law;
(7) Criminal Code.

The oral examination shall cover the fields of accountancy and economics. The Minister of Commerce and Industry may define the limits of the subjects for Examination in so far as he he may deem it necessary so to do.

As mentioned above, any person who desires to become a "Keirishi" must pass the examination according to Art. 2 of the law. Art. 3, however, regulates exemptions from the examination. The persons exempted from the examination are as follows:—

(1) Doctors of Economics (Keizaigaku Hakase) or Doctors of Commerce (Shogaku Hakase) who have studied the science of accountancy;
(2) Those who have studied the science of accountancy at an Imperial University, or at a university established under the University Ordinance, and who are entitled to be designated as Gakushi (Bachelors), or those who have studied the science of accountancy at technical colleges established under the Technical College Ordinance and completed the course;
(3) Those who have studied the science of accountancy at schools deemed by the Competent Minister to be of the same grade as, or a grade higher than, the University or Colleges mentioned in the preceding Number.[1]

As has been stated, there were several societies of accountants in existence besides the Japan Society of Public Accountants before passage of the law. Soon after the law was passed, they changed into the societies of "Keirishi," and some new societies were formed by the Keirishi who did not belong to the old societies. The societies of Keirishi now in existence are as follows:—

1. The Nippon Keirishi Kwai (in Tokio)
   (The Japan Society of "Keirishi")
2. The Tokio Keirishi Kwai (in Tokio)
   (The Tokio Society of "Keirishi")
3. The Zen-Nippin Keirishi Kwai (in Tokio)
   (The Whole-Japan Society of "Keirishi")
4. The Osaka-fu Keirishi Kwai (in Osaka)
   (The Society of "Keirishi" in Osaka Prefecture)
5. The Aichi-ken Keirishi Kwai (in Nagoya)
   (The Society of "Keirishi" in Aichi Prefecture)
6. The Hyogo-ken Keirishi Kwai (in Kobe)
   (The Society of "Keirishi" in Hyogo Prefecture)
7. The Kyoto-fu Keirishi Kwai (in Kyoto)
   (The Society of "Keirishi" in Kyoto Prefecture)
8. The Nippon Kensa Keirishi Kwai (in Osaka)
   (The Japan Society of "Keirishi" specialized in Auditing)
9. The Saitama-ken Keirishi Kwai (in Urawa)
   (The Society of "Keirishi" in Saitama Prefecture)
10. The Miyagi-ken Keirishi Kwai (in Sendai)
    (The Society of "Keirishi" in Miyagi Prefecture)
11. The Zen-Kyushu Keirichi Kyokai (in Fukuoka)
    (The Whole-Kyushu Society of "Keirishi")
12. The Nishi Nippon Keirishi Kwai (in Osaka)
    (The West Japan Society of "Keirishi")
13. The Shidzuoka-ken Keirishi Kwai (in Shidzuoka)
    (The Society of "Keirishi" in Shidzuoka Prefecture)

The first seven societies are incorporated under the civil law and placed under the supervision of the Minister of Commerce and Industry. The last six are unincorporated.

The Japan Society of Public Accountants: Soon after the passage of the law the Japan Society of Public Accountants changed into the Japan Society of "Keirishi," and made some alterations in its constitution and regulations. Its objects are to promote and maintain high professional and moral standards of Keirishi, to assist the country in its economic development, to further the common interests of the members, and to encourage cordial inter-

[1] The full text of the Law and Ordinance will be found in "Proceedings International Congress on Accounting," New York City, 1929.

course and interchange of knowledge among the members.

The principles upon which the Society is working in order to achieve these objectives may be summarized as follows:

1. To express opinions regarding the promulgation, amendment, and improvement of laws, insofar as they concern accountants and accounts, and to evolve methods of putting such views into practice.
2. To educate junior Keirishi.
3. To conduct investigations and research covering the theory and practice of accounting, and to hold lectures and discussions with a view toward furthering development along these lines.
4. To issue reports of the Society.
5. To perform any of the numerous tasks incidental to the above.

The members of the Society are limited to Keirishi engaged in actual practice, so that no examination is required for admission. Any Keirishi is admitted to membership, provided he can secure two recommenders and is approved by the Executive Committee.

The Society is governed by an Executive Committee of five members. At present the number of members of the Society is only 12. While no attempt has been made to survey the other societies, their objectives and programs are probably not much different from those of the Japan Society of Keirishi, although most of them have many more members.

The present status of accountants in Japan is rather poor but the profession will undoubtedly continue to progress, even though the progress will be less rapid than many of us desire.

Yoshiwo Watanabe

Combining Adjusting and Closing Entries

Beginning students in accounting find adjusting entries are one of the chief difficulties in their efforts to master the subject. Teachers also are likely to be seeking constantly for better illustrations and explanations of adjustments. One scheme of simplification is to bring in one or two adjustments such as those for inventory and depreciation very early and bring in the others later. An effort is thus made by the teacher to avoid having the student think of adjustments as a new and complete topic in itself.

Another scheme that may be employed in the early stages is the use of the terms "payable" and "receivable" instead of the new and mysterious word "accrued." Care should be used at first in terminology, but ultimately the student must be familiar with all the customarily used account titles.

It is entirely possible that adjusting entries can and should be eliminated. Of course, the facts requiring adjustment entries must still be explained, but everything necessary for the records can be taken care of by altering the closing entries, and perhaps calling them adjusting-closing entries. A short illustration of this method is given below.

Trial Balance of Company X

December 31, 1938

Cash	$ 100	
Accounts Receivable	500	
Reserve for Bad Debts		$ 25
Inventory, January 1, 1938	800	
Building	2000	
Reserve for Depreciation		200
Prepaid Insurance	60	
Accounts Payable		200
Notes Payable		1200
Mr. X, Capital		1105

Sales		5000
Purchases	3000	
Wages	1000	
Heat and Light	200	
Supplies	100	
Interest Expense	100	
Rental Income		130
	$7860	$7860

Facts Needed for Proper Closing of the Books

1. Inventory, December 31, 1938 is $1000.
2. The bad debt total is estimated at $100.
3. Depreciation is figured at 4%.
4. Insurance prepaid is $20.
5. Wages payable amount to $50.
6. Fuel on hand amounts to $30.
7. Interest prepaid is $40, interest payable $25.
8. Rent of $10 has been collected for January, 1939.

Closing Entries
December 31, 1938

Inventory	$200	
Profit & Loss		$200
To adjust the inventory account to the current figure of $1000 and credit profit and loss with the increase.		
Profit & Loss	$75	
Reserve for Bad Debts		$75
To adjust the reserve to the estimated amount of bad debts ($100), included in the accounts receivable, and to charge profit and loss with the bad debts arising during 1938.		
Profit & Loss	$80	
Reserve for Depreciation		$80
To add the year's depreciation to the reserve and to charge profit and loss with this amount. Rate 4% on cost of $2000.		
Profit & Loss	$40	
Prepaid Insurance		$40
To reduce prepaid insurance to the proper balance of $20 and to charge profit and loss with the $40 insurance expired during the period.		
Profit & Loss	$1050	
Wages		$1050
To charge profit and loss with the cost of labor service received during 1938, $1000 per trial balance, plus $50 accrued wages.		
Profit & Loss	$170	
Heat and Light		$170
To charge profit and loss with the cost of heat and light used during 1938, $200 per trial balance, less $30 fuel on hand.		
Profit & Loss	$85	
Interest Expense		$85
To charge profit and loss with interest applicable to 1938, $100 per trial balance less $40 prepaid to be carried forward to the 1939 account as a debit, and plus $25 accrued to be carried to the 1939 account as a credit.		
Rental Income	$120	
Profit & Loss		$120
To credit profit and loss with rent earned during 1938, $130 per trial balance less $10 applicable to 1939.		
Sales	$5000	
Profit & Loss		$5000
To transfer the sales balance to profit and loss.		
Profit & Loss	$3000	
Purchases		$3000
To transfer the purchases balance to profit and loss.		
Profit & Loss	$100	
Supplies		$100
To close supplies into profit and loss.		
Profit & Loss	$720	
Mr. X, Capital		$720
To transfer the net profit for 1938 to the capital account.		

Certain ledger accounts would appear as indicated below.

Profit and Loss

		LF			LF
1938			1938		
Dec. 31	Bad Debts	75	Dec. 31	Inventory increase	200
31	Depreciation	80	31	Rent	120
31	Insurance	40	31	Sales	5000
31	Wages	1050			
31	Heat and Light	170			
31	Interest Expense	85			
31	Purchases	3000			
31	Supplies	100			
31	To Capital	720			
		5320			5320

Inventory

1938			1938		
Jan. 1		800	Dec. 31	Balance	1000
Dec. 31		200			
		1000			1000
Dec. 31		1000			

Prepaid Insurance

1938			1938		
Dec. 31		60	Dec. 31	To Profit & Loss	40
			31	Balance	20
		60			60
Dec. 31		20			

Reserve for Depreciation

			1938		
			Dec. 31	Balance	200
			31		80

Wages

1938			1938		
Dec. 31		1000	Dec. 31	To Profit & Loss	1050
31	Balance, Accrued	50			
		1050			1050
			Dec. 31	Accrued	50

Heat & Light

1938			1938		
Dec. 31		200	Dec. 31	To Profit & Loss	170
			31	Balance Prepaid	30
		200			200
Dec. 31		30			

Interest Expense

1938			1938		
Dec. 31		100	Dec. 31	To Profit & Loss	85
			31	Balance	15
		100			100
Dec. 31	Prepaid	40	Dec. 31	Accrued	25

Rental Income

1938			1938		
Dec. 31	To Profit & Loss	120	Dec. 31		130
31	Balance Deferred	10			
		130			130
			Dec. 31	Deferred	10

Supplies

1938			1938		
Dec. 31	Balance	100	Dec. 31	To Profit & Loss	100

The other accounts need not be shown here. Quite obviously there are parts in the above that are not as satisfactory as in the traditional methods of adjusting and closing the books. One criticism concerns the handling of accounts subjected to two adjustments, as is the case with interest expense. Indicating how to split and carry forward a balance by means of the explanation to an entry is perhaps a mere subterfuge to evade the problem. Other solutions occurring to the writer would involve departing somewhat from the plan of eliminating adjusting entries as such.

Secondly, where certain adjustments (e.g., depreciation) are made on the books monthly, but closing entries only annually, the above scheme cannot be used. A third criticism is that the record of depreciation expense, bad debts expense, and perhaps other items is not as clearly shown in the ledger as may be desirable. There will also be complications in cost records involving transfers from one account to others as part of the bookkeeping procedure. Other technical difficulties would no doubt become apparent in any practical application of the general method discussed here.

It is at least possible that the method may be more, rather than less difficult, to teach beginning students. It would, however, force the student to think more in terms of what is the proper amount to close to profit and loss for a given period. At present he worries about the adjusting entry as an end in itself, perhaps without thought of a fundamental purpose of adjustments, namely, to facilitate closing proper amounts of expense and income to profit and loss. The student would be relieved of the need for making reversal (or re-adjusting or post-closing) entries, since the balances are left in the original accounts at the time of closing (and adjusting) the books. Thus, the general method here indicated would condense the three steps (adjusting, closing and reversal entries) into but one step.

Clearly the conventional working sheet must be modified, if the above method is to be used in the first approach to the problem. The suggested method given here involves but six columns. The second pair of columns contains the adjusting-closing entries, with all amounts transferred to Profit and Loss shown below the original trial balance totals. All balances carried over from the original trial balance are balance-sheet items and appear in the third pair of columns. The student should have no difficulty in making the separation.

The difficulty with items subjected to more than one adjustment recurs on the working sheet. The solution of this problem may be susceptible to improvement, but appears fairly satisfactory.

The writer has not tried the entries or working sheet in actual classes but believes they would be satisfactory. They may be especially desirable in survey courses intended for students who are not majoring in accounting.

WORKING SHEET
COMPANY X
DECEMBER 31, 1938

Accounts	*Trial Balance*		*Adjusting-Closing Entries* *Dr.*	*Cr.*	*Balance Sheet Items* *Dr.*	*Cr.*
Cash	$ 100	$			$ 100	
Accounts Receivable	500				500	
Reserve for Bad Debts		25		(2) $ 75		$ 100
Inventory, January 1, 1938	800		(1) $ 200		1000	
Building	2000				2000	
Reserve for Depreciation		200		(3) 80		280
Prepaid Insurance	60			(4) 50	20	
Accounts Payable		200				200
Notes Payable		1200				1200
Mr. X, Capital		1105				1105
Sales		5000	(9) 5000			
Purchases	3000			(10) 3000		
Wages	1000			(5) 1050		50 (Accr.)
Heat and Light	200			(6) 170	30 (Def.)	
Supplies	100			(11) 100		
Interest Expense	100			(7) 85*	40 (Def.)	25 (Accr.)
Rental Income		130	(8) 120			10 (Def.)
Totals	$7860	$7860	$5320	$4600		
PROFIT & LOSS						
Inventory Increase				(1) 200		
Bad Debts			(2) 75			
Depreciation			(3) 80			
Insurance			(4) 40			
Wages			(5) 1050			
Heat and Light			(6) 170			
Interest Expense			(7) 85			
Rental Income				(8) 120		
Sales				(9) 5000		
Purchases			(10) 3000			
Supplies			(11) 100			
Totals			$4600	$5320	$3690	$2970
Profit			720			720
			$5320	$5320	$3690	$3690

* As per explanation of journal entry, balance to be carried forward as $40 prepaid and $25 accrued.

I. W. ALM

PROFESSIONAL EXAMINATIONS

A Department for Students of Accounting

HENRY T. CHAMBERLAIN

THE FOLLOWING problems are the first half of the C.P.A. Examination in accounting theory and practice, presented on May 16th and 17th in those states using the questions prepared by the Board of Examiners of the American Institute of Accountants. Candidates were required to solve all problems. The weights given were: problem 1, 10 points; problem 2, 25 points; problem 3, 30 points; and problem 4, 35 points.

No. 1

From the following comparative summary and additional information given, prepare a statement of application of funds:

AMES MANUFACTURING COMPANY

COMPARATIVE SUMMARY OF BALANCE SHEETS

ASSETS

	December 31 1937	December 31 1938	Increase *Decrease**
Current assets:			
Cash	$ 85,000	$ 35,000	$ 50,000*
Receivables (net)	106,000	103,000	3,000*
Inventories	158,000	146,000	12,000*
	$ 349,000	$ 284,000	$ 65,000*
Prepaid insurance, taxes, etc.	$ 8,000	$ 7,000	$ 1,000*
Bond discount and expenses in process of amortization	40,000	65,000	25,000
Sinking-fund deposit account	3,000	5,000	2,000
Property, plant, and equipment	$1,860,000	$2,810,000	$950,000
Less—Reserves for depreciation	852,000	879,000	27,000
	$1,008,000	$1,931,000	$923,000
	$1,408,000	$2,292,000	$884,000

Liabilities

	December 31 1937	December 31 1938	Increase *Decrease**
Current liabilities:			
Bank loans	$	$ 100,000	$100,000
Current maturities of equipment obligations		25,000	25,000
Accounts payable	63,000	42,000	21,000*
Accrued expenses	105,000	82,000	23,000*
	$ 168,000	$ 249,000	$ 81,000
Long-term debt:			
5% first-mortgage, sinking-fund bonds due January 1, 1950	$ 650,000	$ 975,000	$325,000
Deferred equipment obligations		150,000	150,000
	$ 650,000	$1,125,000	$475,000
Capital stock and surplus:			
Capital stock	$ 250,000	$ 350,000	$100,000
Paid-in surplus	250,000	350,000	100,000
Earned surplus	90,000	218,000	128,000
	$ 590,000	$ 918,000	$328,000
	$1,408,000	$2,292,000	$884,000

Additional information given:

(a) Property retirements recorded for the year aggregated $100,000. The excess of such cost over $10,000 salvage realized was charged to depreciation reserves.

(b) Additional securities were sold during the year as follows:
2,000 shares of capital stock of $50 par value, sold at $100 per share
$350,000 par value of first mortgage bonds sold at 90
$175,000 deferred equipment notes at par

(c) Bonds are subject to retirement through a sinking fund created by annual deposits of $25,000 on March 15th. Bonds retired through the sinking fund in 1938 aggregating $25,000 were bought in for $22,000 plus accrued interest of $1,000.

(d) Provisions made by the company for the year 1938 for depreciation and for the amortization of bond discount and expenses were correctly computed.

(e) The following analysis was made of earned surplus:

Balance at December 31, 1937		$ 90,000
Net profit for the year after providing depreciation of $92,000		175,000
Discount on bonds retired		3,000
		$268,000
Deduct:		
Dividends paid	$25,000	
Adjustment of depreciation reserves at December 31, 1937, to basis of treasury department report	25,000	50,000
		$218,000

No. 2

The Sulphur Company, organized January 1, 1934, was formed to mine, refine, and sell sulphur. To that end it secured a twenty-year lease on 500 acres of known sulphur deposits, referred to as section A, and 500 acres, referred to as section B, of potential but undiscovered sulphur deposits. It was estimated after engineers' survey that there were 5,000,000 tons of sulphur under section A at the time of acquisition. Mine reports showed the number of tons taken out by years as follows: 1934, 250,000; 1935, 300,000; 1936, 500,000; 1937, 800,000; 1938, 1,000,000 of which 200,000 tons remained in stock-pile.

The following statement is prepared by the company's bookkeeper:

This statement is correct and all accounting requirements have been met, except that the company has never provided for amortization or depletion since, in the words of the company's president, "it had discovered from prospecting more new deposits than it had mined." Nor has provision been made for depreciation or obsolescence of plant and equipment acquired January 1, 1934, which are estimated to have a useful life greater than the twenty-year period of the leases and a scrap value of $50,000.

The company had a survey made of section B by competent engineers. This survey indicated sulphur deposits of 3,200,000 tons on January 1, 1938, which were estimated to have a fair value under-

Balance-sheet December 31, 1938

Cash	$ 500,000	Current liabilities including interest and taxes accrued	$ 150,000
Receivables	300,000	Bonds payable	300,000
Inventory of crude sulphur at cost of mining and extraction (Market value $200,000)	180,000	Capital stock	1,000,000
Leaseholds—at cost	600,000	Surplus	610,000
Section A—$500,000		Profit and loss, 1938	230,000
Section B— 100,000			
Plant and equipment	460,000		
Development—Section A	200,000		
Prospecting—Section B	50,000		
	$2,290,000		$2,290,000

ground of 11 cents per ton. It was decided to increase the book value of the leasehold, now carried at $100,000, to that value. It was also decided that the company would charge the operations with depletion on the basis of the increased value, although this would not affect the depletion deductible for tax purposes.

Of the total 1938 production of 1,000,000 tons, 400,000 tons were mined from section B, all of which were sold in 1938. Prior to December 31, 1938, the bookkeeper had written down development costs by $50,000, charging this amount to surplus.

From the foregoing data prepare:

(a) Journal entries setting up the proper reserves and making necessary adjustments to other accounts.

(b) Columnar work-sheet showing the changes caused by the adjustments.

(c) Final balance sheet.

No. 3

Part one (18 points)

On January 1, 1938, the City of M had the following assets:

Cash in bank	$ 15,000
Taxes receivable	50,000
Tax title liens	35,000
	$100,000

It also had the following liabilities and reserves:

Creditors	$ 4,000
School board	10,000
Tax revenue notes	6,000
Reserve for taxes and liens	70,000
Surplus revenue	10,000
	$100,000

On January 31, 1938, the budget was adopted as follows:

Resources:	
Surplus revenue appropriated	$ 5,000
License fees and permits	15,000
Delinquent taxes and liens	40,000
Current year's taxes	30,000
	$ 90,000
Appropriations:	
Salaries	$ 8,000
Office expenses	6,000
Garbage collection	7,000
Reserve for uncollectible tax-title liens	5,000
School board	50,000
Reserve for uncollectible 1938 taxes	14,000
	$ 90,000

During 1938 the cash collections were:

Tax-title liens	$ 3,000
License fees and permits	17,000
Delinquent taxes	38,000
1938 taxes	36,000
	$ 94,000

And the following disbursements were made:

Salaries	$ 19,000
Office expenses	7,000
Garbage collections	8,000
School board	30,000
1937 bills in full settlement of all claims	3,920
	$ 67,920

Taxes assessed for 1938 amounted to $66,200. Unpaid liabilities on December 31, 1938, aggregating $1,200 had been incurred for office expenses. Taxes receivable for 1938 were canceled to the amount of $500.

Prepare the following statements:

(Ia) Balance sheet at December 31, 1938.

(Ib) Reserve for taxes and liens.

(Ic) Surplus revenue (unappropriated surplus).

Submit journal entries and work sheets.

Part two (12 points)

The city also built and operated its own water plant in 1938 for which it passed an ordinance appropriating the sum of $150,000, the amount of the contract for the plant, and authorizing the issue of not over $150,000 bonds. Of these bonds $145,000 were sold for $150,500 cash.

Water rents billed to consumers amounted to $26,000 on which $22,000 was collected.

The total cost of the plant was $154,000,

and the contractor was paid $150,000, leaving $4,000 owing him on December 31,1938.

In 1938 the following disbursements were made:

Office salaries	$ 2,000
Water meter reader's salary	2,000
Bonds redeemed at par	10,000
Interest on bonds	4,500

Prepare the following statements:
(IIa) Balance-sheet for capital fund.
(IIb) Balance-sheet for operating fund.

Submit journal entries and work sheets for both funds.

No. 4

The HKH Oxygen Company operates two producing units—an electrolytic unit and a liquefaction unit, each of which, when operating, produces at capacity.

1. *Electrolytic unit*

The electrolytic unit produces one volume of oxygen and two volumes of hydrogen simultaneously and this production ratio is maintained throughout, whenever the unit operates. The unit consists of a number of metal tanks, or "cells," containing electrodes carrying low-voltage, high-amperage electrical current.

Water is a compound of oxygen and hydrogen. The positive electrical terminal in each cell attracts oxygen, the negative terminal attracts hydrogen. They bubble off as gases and are collected commercially pure at the rate of 800 cubic feet of oxygen and 1,600 cubic feet of hydrogen per hour. Distilled water is continuously added to the cells.

The operating record of the unit for the year was:

7,100	hours producing both gases
500	hours producing hydrogen only, all oxygen escaping because empty cylinders were not available
400	hours producing oxygen only, all hydrogen escaping for the same reason
760	hours idle, repair, etc.
8,760	hours, being 365 days of 24 hours

The entire cost of operating the electrolytic unit during the year was $48,000 which includes depreciation. Since the above production ratio of 1 to 2 is constant, this cost is to be apportioned between the two gases on the basis of volume actually produced by the unit. The production cost value of the gases lost is to be treated as a deduction from the gross profit on sales.

2. *Liquefaction unit*

The liquefaction unit separates atmospheric air (containing 20% oxygen and 80% nitrogen) by mechanical means. Air is compressed and expanded and the temperature lowered to about 300° Fahrenheit below zero, which liquefies the air. The unit produces liquid air at a uniform rate.

Oxygen and nitrogen boil (leave the liquid air as gases) at different temperatures, and one or the other (but not both together) is collected commercially pure. The operating record of the unit during the year was:

Oxygen—7,200 hours at the rate of 1,000 cubic feet per hour
Nitrogen—1,200 hours at the rate of 1,333⅓ cubic feet per hour

The operating cost of the liquefaction unit, including depreciation, aggregated $30,240 for the year. Because of the uniform rate of production this cost is to be apportioned between the two gases on the basis of the number of hours operating.

3. *Compressing and filling*

The gases are filled into steel cylinders, each of which is always used for the same gas. They are all of the same capacity (except the oxygen 110's) and they are filled at a uniform pressure by three very similar compressors, each compressing only one gas. However, the gases differ in compressibility and the cylinder contents are shown below.

The cost of compression was $13,480.00 for the year including depreciation of the

compressors and the cost is to be allocated to the gases produced on the basis of cubic feet compressed.

The cost of filling, that is, connecting and disconnecting cylinders at the charging line, amounted to $5,643 and is the same for each cylinder, large or small. During the year 6,000 small oxygen cylinders were filled.

4. *Cylinders*

Each cylinder is always refilled with the same gas. They are always returned when empty and no charge is made for their use. The following data are given concerning the number of cylinders owned (all in service) and their depreciation:

	Contents Cu. ft.	Number owned	Depreciation Rate	Depreciation Amount
Hydrogen	190	5,120	$2.09	$10,700.80
Oxygen	220	10,260	2.09	21,443.40
Oxygen	110	1,508	1.32	1,990.56
Nitrogen	200	1,662	2.09	3,473.58

5. *Other data*

At the beginning of the year there were on hand 310 full nitrogen cylinders of which the contents of 62,000 cubic feet were carried forward at the previous year's cost of $.424 per 100 cubic feet or $262.88. All other cylinders were on hand empty.

At the end of the year 200 full small oxygen cylinders were on hand; their contents, 22,000 cubic feet, are carried forward at the average year's cost. All other cylinders were on hand empty.

All gases are valued for inventory purposes at average cost before charging depreciation of cylinders.

The average sales prices of the gases were as follows:

Hydrogen (in large cylinders) $.80 per 100 cubic feet.
Oxygen (in large cylinders) $1.00 per 100 cubic feet.
Oxygen (in small cylinders) $1.20 per 100 cubic feet.
Nitrogen (in large cylinders) $1.20 per 100 cubic feet.

The total of all selling, general and executive expenses, interest and taxes was $76,375.

6. *Required*

From the foregoing information prepare the following statements:

(a) Cost of production and sales

(b) Profit and loss

Also show the calculations of operating data and the apportionment of costs.

Solution to Problem 1

AMES MANUFACTURING COMPANY

Statement of Application of Funds for the year ended December 31, 1938

Funds provided by			
Profits—			
Net income (per books)		$175,000.00	
Add charges not requiring funds:			
Depreciation	$ 92,000.00		
Amortization of bond discount and expense	10,000.00	102,000.00	$ 277,000.00
Sales of securities—			
Capital stock (2000 shares at 100)		$200,000.00	
5% first mortgage bonds at 90		315,000.00	
Deferred equipment obligations	$175,000.00		
Less current maturities of equipment obligations	25,000.00	150,000.00	665,000.00
Salvage value of property retired			10,000.00
Decrease in working capital			147,000.00
Total			$1,099,000.00

Funds applied to

Purchase of property, plant and equipment	$1,050,000.00
Retirement of 5% first mortgage bonds ($25,000.00 par)	22,000.00
Increase in sinking fund deposit	2,000.00
Dividends paid	25,000.00
Total	$1,099,000.00

AMES MANUFACTURING COMPANY

Statement of Changes in Working Capital
Year ended December 31, 1938

	December 31, 1937	December 31, 1938	Increase	Decrease
Current assets				
Cash	$ 85,000.00	$ 35,000.00		$ 50,000.00
Receivables (net)	106,000.00	103,000.00		3,000.00
Inventories	158,000.00	146,000.00		12,000.00
Prepaid insurance, etc.	8,000.00	7,000.00		1,000.00
Total	$357,000.00	$291,000.00		$ 66,000.00
Current liabilities				
Bank loans		$100,000.00		$100,000.00
Current maturities of equipment obligations		25,000.00		25,000.00
Accounts payable	$ 63,000.00	42,000.00	$ 21,000.00	
Accrued expenses	105,000.00	82,000.00	23,000.00	
Total	$168,000.00	$249,000.00	$ 44,000.00	$191,000.00
Working capital	$189,000.00	$ 42,000.00		
Net decrease in working capital			147,000.00	
			$191,000.00	$191,000.00

NOTE: The examinee should never prepare a worksheet for a problem of this type. The facts are simple and the solution follows directly from the points set forth in the problem.

Solution to Problem 2

(a)

(1)

Development expense		$ 50,000.00	
Surplus			$ 50,000.00
To reinstate development cost incorrectly charged off to surplus.			

(2)

Amortization of leasehold and development costs, Section A, 1934 to 1937 inclusive		$277,500.00	
Amortization of leasehold and development costs, Section A, 1938		90,000.00	
Reserve for amortization of leasehold and development costs, Section A			$367,500.00
To amortize the leasehold and development costs applicable to the production of Section A:			
Leasehold cost	$500,000.00		
Development cost	250,000.00		
Total	$750,000.00		
Cost per ton, $.15 ($750,000.00 ÷ 5,000,000 tons)			
Production prior to 1938, 1,850,000 tons at $.15 per ton	$277,500.00		
Production in 1938, 600,000 tons at $.15 per ton	90,000.00		
Total	$367,500.00		

(3)

Leasehold—Section B	$252,000.00	
Reserve for revaluation of leasehold, Section B		$252,000.00
To increase the carrying value of the leasehold on Section B to $352,000.00 (3,200,000 tons at $.11 per ton).		

(4)

Amortization of leasehold valuation and development cost—Section B		$ 50,250.00	
Reserve for amortization of leasehold valuation and development cost—Section B			$ 50,250.00

To amortize the leasehold valuation and development costs applicable to the production of Section B:

Leasehold cost	$100,000.00
Write-up	252,000.00
Prospecting costs	50,000.00
Total	$402,000.00

Cost per ton $.125625 ($402,000.00 ÷ 3,200,000 tons)
Production in 1938, 400,000 tons at $.125625 .... $ 50,250.00

(5)

Reserve for revaluation of leasehold	$ 31,500.00	
Profit and loss		$ 31,500.00

To correct profit and loss for overstated charge to operations for amortization of leasehold on Section B. The charge is overstated $.07875 per ton on 400,000 tons produced and sold.

(6)

Depreciation on plant and equipment—1934 to 1937 inclusive	$ 92,500.00	
Depreciation on plant and equipment—1938	40,000.00	
Reserve for depreciation on plant and equipment		$132,500.00

To write-off depreciation on plant and equipment on the basis of tonnage refined:

Cost of plant and equipment		$460,000.00
Salvage value		50,000.00
Cost to be charged off		$410,000.00
Total tonnage (estimated)	8,200,000	

Cost per ton $.05

Tons refined prior to 1938, 1,850,000 at $.05 per ton	$ 92,500.00
Tons refined in 1938, 800,000 at $.05 per ton	40,000.00
Total	$132,500.00

(7)

Inventory of crude sulphur	$ 30,000.00	
Profit and loss, 1938		$ 30,000.00

To adjust inventory for leasehold and development costs (200,000 tons at $.15 per ton).

(8)

Profit and loss, 1938	$ 10,000.00	
Inventory of crude sulphur		$ 10,000.00

To adjust inventory to market value.

(b)

THE SULPHUR COMPANY
Work Sheet
December 31, 1938

	Balance Sheet December 31, 1938 (Before adjustment)		Adjustments		Balance Sheet December 31, 1938 (After adjustment)	
	Debit	*Credit*	*Debit*	*Credit*	*Debit*	*Credit*
Cash	$ 500,000.00				$ 500,000.00	
Receivables	300,000.00				300,000.00	
Inventory of crude sulphur	180,000.00		(7) $ 30,000.00	(8) $ 10,000.00	200,000.00	
Leaseholds:						
Section A	500,000.00				500,000.00	
Section B	100,000.00		(3) 252,000.00		352,000.00	
Plant and equipment	460,000.00				460,000.00	
Development—Section A	200,000.00		(1) 50,000.00		250,000.00	

Prospecting—Section B.....	50,000.00				50,000.00	
Current liabilities		$ 150,000.00				$ 150,000.00
Bonds payable..		300,000.00				300,000.00
Capital stock...		1,000,000.00				1,000,000.00
Surplus........		610,000.00	(9) 268,750.00	(1) 50,000.00		391,250.00
Profit and loss (from operations)		230,000.00	(2) 90,000.00			
			(4) 50,250.00			
			(6) 40,000.00			
			(8) 10,000.00			
				(7) 30,000.00		
			(9) 69,750.00			
	$2,290,000.00	$2,290,000.00				
Other charges and credits to profit and loss:				(9) 338,500.00		
Amortization of leasehold and development costs, Section A—1934 to 1937..........			(2) 277,500.00			
Depletion on appreciation, Section B.......				(5) 31,500.00		
Depreciation on plant and equipment, 1934 to 1937..............................			(6) 92,500.00			
Reserve for amortization of leasehold and development costs, Section A...............				(2) 367,500.00		367,500.00
Reserve for revaluation of leasehold, Section B			(5) 31,500.00	(3) 252,000.00		220,500.00
Reserve for amortization of leasehold valuation and development cost, Section B..........				(4) 50,250.00		50,250.00
Reserve for depreciation on plant and equipment				(6) 132,500.00		132,500.00
			$1,262,250.00	$1,262,250.00	$2,612,000.00	$2,612,000.00

(c)

THE SULPHUR COMPANY
Balance Sheet
December 31, 1938
Assets

Current assets			
Cash............		$ 500,000.00	
Receivables............		300,000.00	
Inventory of crude sulphur at market value which is less than cost........		200,000.00	$1,000,000.00
Fixed assets			
Leasehold, Section A............	$500,000.00		
Development cost, Section A............	250,000.00		
Total cost, Section A............	$750,000.00		
Less reserve for amortization............	367,500.00	382,500.00	
Leasehold, Section B at appraised value (cost $100,000.00)...	$352,000.00		
Prospecting cost, Section B............	50,000.00		
Total............	$402,000.00		
Less: Reserve for amortization............	$ 50,250.00		
Reserve for revaluation of leasehold............	220,500.00		
	$270,750.00	131,250.00	
Plant and equipment............	$460,000.00		
Less reserve for depreciation............	132,500.00	327,500.00	841,250.00
Total assets............			$1,841,250.00

Liabilities

Current liabilities including interest and taxes accrued............		$ 150,000.00
Bonds payable............		300,000.00
Capital stock and surplus		
Capital stock............	$1,000,000.00	

Surplus:			
Balance, per books	$610,000.00		
Adjustment for write-off of development cost	50,000.00		
	$660,000.00		
Net loss for year ended December 31, 1938	268,750.00	391,250.00	1,391,250.00
Total liabilities			$1,841,250.00

COMMENTS

1. The reserve for revaluation of leasehold is treated as a valuation account and is, therefore, deducted from the asset in the balance sheet to arrive at the unamortized cost of the leasehold. The reserve and profit and loss are adjusted to correct the final net income figure for the overstated depletion charged to operations.

2. Plant and equipment are depreciated on the basis of tonnage processed, rather than tonnage mined. It is assumed that no part of the inventory has been refined. Undoubtedly, some charge should be made for depreciation of mining equipment probably included in the account, plant and equipment, but no information is given on the amount of such equipment.

A good case can be made against the practice of depreciating assets on the basis of production, but in this case the method used seems justified by the facts, namely:

(a) The plant is on leased property.

(b) In five years time the company has taken out of the ground more than one-fourth of the estimated deposit.

(c) During the first four years, when only Section A was being worked, the company took out more than one-fifth of the estimated deposits of both Sections A and B.

Solution to Problem 3

(1)		
Estimated revenue from license fees and permits	$15,000.00	
Estimated revenue from 1938 taxes	30,000.00	
Estimated budget surplus		$45,000.00
To record the budget revenue estimates.		
(2)		
Estimated budget surplus	$90,000.00	
Appropriations:		
Salaries		$ 8,000.00
Office expense		6,000.00
Garbage collection		7,000.00
Reserve for uncollectible tax-title liens		5,000.00
School board		50,000.00
Reserve for uncollectible 1938 taxes		14,000.00
To record appropriations.		
(3)		
Taxes receivable 1938	$66,200.00	
Estimated revenue from 1938 taxes		$66,200.00
To record taxes assessed.		
(4)		
Estimated revenue from 1938 taxes	$ 500.00	
Taxes receivable for 1938		$ 500.00
To record taxes cancelled.		
(5)		
Cash	$94,000.00	
Tax-title liens		$ 3,000.00
Estimated revenue from license fees and permits		17,000.00
Taxes receivable (delinquent)		38,000.00
Taxes receivable, 1938		36,000.00
Cash collections during 1938.		

(6)

Appropriations:		
Salaries	$19,000.00	
Office expense	7,000.00	
Garbage collection	8,000.00	
School board	20,000.00	
School board	10,000.00	
Creditors	4,000.00	
Surplus revenue		$ 80.00
Cash		67,920.00
Cash disbursements during 1938.		

(7)

Appropriations—Office expense	$ 1,200.00	
Creditors		$ 1,200.00
To record liability for office expense.		

(8)

Reserve for taxes and liens	$26,000.00	
Surplus revenue		$26,000.00
To adjust the reserve to the balance of delinquent taxes receivable and tax title liens.		

(9)

Estimated revenue from license fees and permits	$ 2,000.00	
Estimated revenue from 1938 taxes	35,700.00	
Surplus revenue	7,300.00	
Estimated budget surplus		$45,000.00
To close estimated revenue and budget surplus accounts.		

CITY OF M

Work Sheet—General Fund

January 1, 1938 to December 31, 1938

	Balance Sheet January 1, 1938		Transactions and Adjustments		Balance Sheet December 31, 1938	
	Debit	*Credit*	*Debit*	*Credit*	*Debit*	*Credit*
Cash in bank	$ 15,000.00		(5) $ 94,000.00	(6) $ 67,920.00	$ 41,080.00	
Taxes receivable (delinquent)	50,000.00			(5) 38,000.00	12,000.00	
Taxes receivable, 1938			(3) 66,200.00	(5) 36,000.00 (4) 500.00	29,700.00	
Tax title liens	35,000.00			(5) 3,000.00	32,000.00	
Creditors		$ 4,000.00	(6) 4,000.00	(7) 1,200.00		$ 1,200.00
School board		10,000.00	(6) 10,000.00			
Tax-revenue notes		6,000.00				6,000.00
Reserve for taxes and liens		70,000.00	(8) 26,000.00			44,000.00
Surplus revenue		10,000.00	(9) 7,300.00	(8) 26,000.00 (6) 80.00		28,780.00
Estimated revenue from license fees and permits			(9) 2,000.00 (1) 15,000.00	(5) 17,000.00		
Estimated revenue from 1938 taxes			(4) 500.00 (1) 30,000.00 (9) 35,700.00	(3) 66,200.00		
Estimated budget surplus			(2) 90.000.00	(9) 45,000.00 (1) 45,000.00		
Appropriations:						
Salaries			(6) 19,000.00	(2) 8,000.00	11,000.00	
Office expense			(7) 1,200.00 (6) 7,000.00	(2) 6,000.00	2,200.00	
Garbage collections			(6) 8,000.00	(2) 7,000.00	1,000.00	
Reserve for uncollectible tax-title liens				(2) 5,000.00		5,000.00
School board			(6) 20,000.00	(2) 50,000.00		30,000.00
Reserve for uncollectible 1938 taxes				(2) 14,000.00		14,000.00
	$100,000.00	$100,000.00	$435,900.00	$435,900.00	$128,980.00	$128,980.00

(1a)

City of M
Balance Sheet—General Fund
December 31, 1938
Assets

Cash in bank		$41,080.00
Taxes receivable, 1938		29,700.00
Taxes receivable (delinquent)	$12,000.00	
Tax-title liens	32,000.00	
	$44,000.00	
Less reserve for taxes and liens	44,000.00	Nil
Total		$70,780.00

Liabilities

Creditors		$ 1,200.00
Tax revenue notes		6,000.00
Unencumbered appropriations:		
Reserve for uncollectible tax-title liens	$ 5,000.00	
School board	30,000.00	
Reserve for uncollectible 1938 taxes	14,000.00	49,000.00
Surplus revenue:		
Balance, December 31, 1938	$28,780.00	
Less expenditures in excess of appropriations	14,200.00	14,580.00
Total		$70,780.00

(1b)

City of M
Reserve for Taxes and Liens
December 31, 1938

Balance, January 1, 1938	$70,000.00
Less transfer to surplus revenue to reduce reserve to the amount of delinquent taxes and tax liens. (Journal entry 8)	26,000.00
Balance, December 31, 1938	$44,000.00

(c)

City of M
Statement of Surplus Revenue
December 31, 1938

Balance, January 1, 1938		$10,000.00
Cash discount		80.00
Transfer from reserve for taxes and liens		26,000.00
Excess of actual revenue over estimated revenue:		
License fees and permits	$ 2,000.00	
1938 taxes	35,700.00	37,700.00
Total		$73,780.00
Less excess of appropriations over estimated revenue		45,000.00
Balance, December 31, 1938		$28,780.00

Journal Entries—Capital Fund

(1)

Bonds authorized	$150,000.00	
Surplus		$150,000.00
To set up bonds authorized.		

(2)

Surplus	$150,000.00	
Appropriations		$150,000.00
Appropriations authorized.		

(3)

Appropriations	$150,000.00	
Contract payable		$150,000.00
Contract for construction of plant.		

(4)

Cash	$150,500.00	
Bonds authorized		$145,000.00
Premium on bonds		5,500.00
Sale of bonds.		

(5)

Expenditures in excess of appropriations	$ 4,000.00	
Contract payable		$ 4,000.00
To record liability to contractor in excess of original contract.		

(6)

Contract payable	$150,000.00	
Cash		$150,000.00
Payment to contractor.		

(7)

Plant	$154,000.00	
Bonds payable		$150,000.00
Surplus		4,000.00
To set up plant and bond liability.		

(8)

Bonds payable	$ 10,000.00	
Surplus		$ 10,000.00
To record bonds redeemed.		

Journal Entries—Operating Fund

(1)

Accounts receivable	$ 26,000.00	
Water rents		$ 26,000.00
Water rents billed.		

(2)

Cash	$ 22,000.00	
Accounts receivable		$ 22,000.00
Water rents collected.		

(3)

Office salaries	$ 2,000.00	
Water-meter reader's salary	2,000.00	
Bonds redeemed	10,000.00	
Interest on bonds	4,500.00	
Cash		$ 18,500.00
1938 disbursements.		

(4)

Water rents	$ 26,000.00	
Office salaries		$ 2,000.00
Water-meter reader's salary		2,000.00
Bonds redeemed		10,000.00
Interest on bonds		4,500.00
Surplus		7,500.00
To close income and expense accounts.		

NOTE. It is assumed that bonds were redeemed out of current fund cash, an act which results in a charge to current fund surplus and a credit to capital fund surplus.

CITY OF M

Water Department—Work Sheet
January 1, 1938 to December 31, 1938

	Transactions		Income and Expense		Balance Sheet December 31, 1938	
Capital fund	*Debit*	*Credit*	*Debit*	*Credit*	*Debit*	*Credit*
Plant	(7) $154,000.00				$154,000.00	
Bonds authorized	(1) 150,000.00	(4) $145,000.00			5,000.00	
Cash	(4) 150,500.00	(6) 150,000.00			500.00	
Expenditures in excess of appropriations	(5) 4,000.00				4,000.00	

Bonds payable	(8) $ 10,000.00	(7) $150,000.00				$140,000.00
Premium on bonds		(4) 5,500.00				5,500.00
Contract payable	(6) 150,000.00	(5) 4,000.00 (3) 150,000.00				4,000.00
Appropriations	(3) 150,000.00	(2) 150,000.00				
Surplus	(2) 150,000.00	(1) 150,000.00 (7) 4,000.00 (8) 10,000.00				14,000.00
	$918,500.00	$918,500.00			$163,500.00	$163,500.00
Operating fund						
Cash	(2) $ 22,000.00	(3) $ 18,500.00			$ 3,500.00	
Accounts receivable	(1) 26,000.00	(2) 22,000.00			4,000.00	
Water rents		(1) 26,000.00		$26,000.00		
Office salaries	(3) 2,000.00		$ 2,000.00			
Meter reader's salary	(3) 2,000.00		2,000.00			
Bonds redeemed	(3) 10,000.00		10,000.00			
Interest on bonds	(3) 4,500.00		4,500.00			
	$ 66,500.00	$ 66,500.00	$18,500.00	$26,000.00		
Net income			7,500.00			$ 7,500.00
			$26,000.00	$26,000.00	$ 7,500.00	$ 7,500.00

CITY OF M

Balance Sheet—Water Department Capital Fund

December 31, 1938

Assets

Plant		$154,000.00
Cash		500.00
Total		$154,500.00

Liabilities

Bonds payable, authorized	$140,000.00	
Less bonds authorized and unissued	5,000.00	135,000.00
Premium on bonds		5,500.00
Contract payable		4,000.00
Surplus:		
Balance (per books)	$ 14,000.00	
Less expenditures in excess of appropriations	4,000.00	10,000.00
Total		$154,500.00

CITY OF M

Balance Sheet—Water Department Operating Fund

December 31, 1938

Assets

Cash	$3,500.00
Accounts receivable	4,000.00
Total	$7,500.00

Liabilities

Surplus	$7,500.00

COMMENTS

General Fund

1. The period covered by the budget of January 31, 1938 is not given, consequently the unencumbered appropriations are shown as such in the balance sheet.

2. Expenditures in excess of appropriations are shown as a deduction from surplus. Deficiency appropriations will have

to be made in either the current or succeeding period to cover these illegal expenditures.

3. If the tax revenue notes apply to periods for which taxes were collected the cash should be earmarked to show this situation.

Water Department Funds

4. No provision is made for depreciation of plant and equipment. In a publicly owned utility provision should be made for depreciation.

5. The bond premium was not amortized because the life of the bonds was not given. Premium on bonds should be treated as a reduction in interest expense.

6. Expenditures in excess of appropriations are carried as a deduction from surplus until disposed of by deficiency appropriations or transfer from operating fund.

Solution to Problem 4

	Oxygen			Hydrogen			
Electrolytic unit	Hours	Cubic feet	Cost	Hours	Cubic feet	Cost	Total cost
Total production	8,000	6,400 M.	$16,000.00	8,000	12,800 M.	$32,000.00	$48,000.00
Gas escaped	500	400 M.	1,000.00	400	640 M.	1,600.00	2,600.00
Gas produced for sale	7,500	6,000 M.	$15,000.00	7,600	12,160 M.	$30,400.00	$45,400.00

Rate of production—Oxygen .8 M. cubic feet per hour
Hydrogen 1.6 M. cubic feet per hour
Cost per thousand cubic feet
Oxygen $16,000.00 ÷ 6,400 M. = $2.50
Hydrogen $32,000.00 ÷ 12,800 M. = $2.50

Liquefaction unit	Hours	Cubic feet	Cost
Oxygen	7,200	7,200 M.	$25,920.00
Nitrogen	1,200	1,600 M.	4,320.00
Total	8,400		$30,240.00

Average cost of oxygen produced	Cubic feet	Cost	Average cost per M. cubic feet
Electrolytic unit	6,000 M.	$15,000.00	$2.50
Liquefaction unit	7,200 M.	25,920.00	$3.60
Combined	13,200 M.	$40,920.00	$3.10

Compressing cost	Cubic feet	Cost
Oxygen	13,200 M.	$ 6,600.00
Hydrogen	12,160 M.	6,080.00
Nitrogen	1,600 M.	800.00
Total	26,960 M.	$13,480.00

Cost per thousand cubic feet ($13,480.00 ÷ 26,960 M.) = $.50

Filling Cost	Cubic feet	Cylinder content	Cylinders	Cost
Oxygen:				
Small cylinders	660 M.	110	6 M.	$ 250.80
Large cylinders	12,540 M.	220	57 M.	2,382.60
Hydrogen	12,160 M.	190	64 M.	2,675.20
Nitrogen	1,600 M.	200	8 M.	334.40
Total			135 M.	$5,643.00

Cost per thousand cylinders ($5,643.00 ÷ 135) = $41.80

HKH Oxygen Company

Statement of Cost of Production and Sales

Year 19–

	Oxygen "110's"	Oxygen "220's"	Oxygen Total	Hydrogen	Nitrogen	Total
Production for sale (schedule)	660 M.	12,540 M.	13,200 M.	12,160 M.	1,600 M.	
Cost of production (schedule)	$2,046.00	$38,874.00	$40,920.00	$30,400.00	$ 4,320.00	$ 75,640.00
Compressing cost (schedule)	330.00	6,270.00	6,600.00	6,080.00	800.00	13,480.00
Filling cost (schedule)	250.80	2,382.60	2,633.40	2,675.20	334.40	5,643.00
Cylinder depreciation cost	1,990.56	21,443.40	23,433.96	10,700.80	3,473.58	37,608.34
Total cost of production	$4,617.36	$68,970.00	$73,587.36	$49,856.00	$ 8,927.98	$132,371.34
Add beginning inventory of nitrogen					262.88	262.88
Total	$4,617.36	$68,970.00	$73,587.36	$49,856.00	$ 9,190.86	$132,634.22
Less ending inventory of oxygen	87.56		87.56			87.56
Cost of sales	$4,529.80	$68,970.00	$73,499.80	$49,856.00	$ 9,190.86	$132,546.66

HKH Oxygen Company

Profit-and-Loss Statement

Year 19–

	Oxygen "110's"	Oxygen "220's"	Oxygen Total	Hydrogen	Nitrogen	Total
Production for sale	660 M.	12,540 M.		12,160 M.	1,600 M.	
Add: Beginning inventory					62 M.	
Less: Ending inventory	22 M.					
Quantity sold	638 M.	12,540 M.		12,160 M.	1,662 M.	
Sales price—per thousand	$ 12.00	$ 10.00		$ 8.00	$ 12.00	
Sales	$7,656.00	$125,400.00	$133,056.00	$97,280.00	$19,944.00	$250,280.00
Cost of goods sold	4,529.80	68,970.00	73,499.80	49,856.00	9,190.86	132,546.66
Gross profit	$3,126.20	$ 56,430.00	$ 59,556.20	$47,424.00	$10,753.14	$117,733.34
Less loss from escaped gas						2,600.00
Gross profit						$115,133.34
Less: Selling, general and administrative expenses						76,375.00
Net income from operations						$ 38,758.34

GENERAL COMMENTS

Here is a set of problems requiring a considerable volume of work but lacking in substance. Problem 1 is elementary. Problem 2 presents nothing that should bother a second-year student in accounting and from the point of view of the C.P.A. examination is objectionable in that it requires the candidate to go through unnecessary motions. There is little point in calling for the preparation of both journal entries and a columnar work-sheet.

Problem 3 is a poor one because many points of essential information are lacking: the period covered by the budget, the rate of depreciation on the water plant, the life of the bond issue, clues that would explain the discrepancy between appropriations and expenditures and the discrepancy between estimated 1938 taxes and taxes assessed. What was said about unnecessary requirements in problem 2 applies with even more force to problem 3. In addition to requiring balance sheets and statements of the tax reserve and surplus, the examinee's time is wasted by requiring, for both sections of the problem, both journal entries and work-sheets.

Problem 4 is an interesting little lesson in chemistry which will consume time in making arithmetical calculations.

A suggested time schedule is given below:

Problem 1— 30 minutes
Problem 2— 75 minutes
Problem 3— 90 minutes
Problem 4—120 minutes

The Accounting Review

THEORIES & PRACTICE

CERTIFICATE REVISED

Since the publication of the September Review the report of the Committee on Auditing Procedure of the American Institute of Accountants has been revised. The changes have to do with the alteration of the proposed procedures relating to receivables and inventories, whereby physical tests and verification by correspondence have been cut down to practically the same level as called for by previous practice.

It might not be unexpected, following the McKesson and Robbins disclosures, that accountants, seeking protection, should amplify their responsibilities in an unnatural degree and reach a somewhat hysterical conclusion from which time alone would have made them recede. The professional criticism was that participating in inventory counts might give the accountant the appearance of appraiser; that tests, fully as acceptable as circularization, are available for determining the existence and propriety of receivables.

The certificate was modified as follows (matter in *italics* omitted; new matter in SMALL CAPS):

> To the Board of Directors (or Stockholders) of the XYZ Company:
>
> We have examined the balance sheet of the XYZ Company as of April 30, 1939, and the statements of income and surplus for the fiscal year then ended, have reviewed the system of internal control and the accounting procedures of the Company and WITHOUT MAKING A DETAILED AUDIT OF THE TRANSACTIONS, have examined or tested accounting records of the Company and other supporting evidence, by methods and to the extent we deemed appropriate.
>
> In our opinion, the accompanying balance sheet and related statements of income and surplus *fairly* present FAIRLY the position of the XYZ Company at April 30, 1939, and the results of its operations for the fiscal year, *and conform to* IN CONFORMITY WITH generally accepted accounting principles applied on a basis consistent with THAT OF the preceding year.

Except for inserting the reference to a detailed audit, the changes were textual and the same remarks can be applied to the new certificate as were made previously in these columns of the Review.

To summarize what has been said before: the certificate [or report] is defective in that it is designed to protect the accountant rather than to give information to those who rely on the information which financial statements are supposed to reveal. This does not mean that any other form of certificate, short or long, is to be preferred, but it does mean that the accountant would be better off if he omitted the certificate entirely and merely affixed his signature to the financial statements prepared as the result of his audit. Many qualifications and disclosures can be put in the financial statements where they may be read in conjunction with the items to which they refer. Others, having a general character and not related to particular items, could be embodied in a simple form of statement preceding the accountant's signature. The development of qualification methods and forms would make an admirable professional study.

Words designed to protect cannot possibly be interpreted as the accountant would like to have them interpreted; his surest protection will come from observing standards of audit practice and statement presentation designed to safeguard and in-

form investors. These are and will continue to be tasks sufficient to tax the resourcefulness of the most skilled members of the profession.

SOME OLD "RULES" REVIVED

In September three bulletins were issued by a committee of the American Institute of Accountants known as the Committee on Accounting Procedure. These bulletins were the first of a series of "pronouncements" following "studies of accounting questions." As the writer of these lines stated in the September REVIEW, the bulletins unfortunately do not show the promise held out for them by the Committee. As examples of accounting research or efforts to bring a scientific attitude to bear on the problems of accounting theory, they have succeeded in being little more than attempts to explain and justify practices existing among professional accountants.

Bulletin No. 1 contains a statement of objectives and reproduces with approval seven "rules" six of which appeared as far back as 1932 in formal correspondence between an Institute Committee and the New York Stock Exchange. These rules are not accompanied by reasons for their adoption and they may prove to be embarrassing if the Committee makes any real progress beyond present-day accounting practice and finds it necessary to recant them. They are conclusions which if justified at all should have followed a research program rather than have preceded it. Moreover they are loosely phrased and their application is obscure. Following is a paraphrase of the seven rules together with a number of questions, related to the subject matter, which their application to practical situations will raise:

(1) Unrealized profit should not find its way into the income account "directly or indirectly," by charging against it items that should "fall to be charged" to the income account. Does this refer primarily to deferred income or to unrealized appreciation? If the latter, is the intent of the "rule" to discourage charging to "unrealized appreciation" the portion of a depreciation provision based on the excess of appraised values over cost? Possibly not, for the rule goes on to say that profits are realized when sales are made except that in certain industries (packing houses, it says) inventories by trade custom are valued at net selling prices. What is the connection between valuing inventories and charging expenses to unrealized profits? Should a comma appear after "directly" rather than "indirectly"? Does "fall to be charged" mean "ought to be charged?"

(2) Charges should not be made to capital surplus "which would otherwise fall to be made" against the income account, unless stockholders approve. Does this justify making charges to paid-in surplus whenever stockholders permit, regardless of the existence of an earned-surplus account? What is meant to be included under capital surplus? A portion of this rule is taken up in Bulletin No. 3.

(3) Earned surplus prior to acquisition is not a part of consolidated earned surplus, and a dividend therefrom is not properly credited to the income account of the parent company. What is meant by "acquisition": the purchase date of a block of stock without regard to the date a majority control was obtained; or the date on which enough shares were purchased to establish a controlling interest?

(4) Treasury stock may be an asset, but dividends therefrom should not be treated as income. Does not consistency demand the handling of treasury stock on the balance sheet in a manner consonant with its position on the profit-and-loss statement? Is not the idea of treasury stock as an asset now pretty well repudiated? What are the mysterious "circumstances" under which the showing of treasury stock as an asset is justified?

(5) Receivables from officers, employees, and affiliated companies must be shown separately from other receivables. Should an exception be made of minor items or items arising and paid for in the ordinary course

of business? What of officers' accounts and notes payable; should they be displayed separately from other payables?

(6) When capital stock is issued "nominally" in exchange for property, and as a part of the exchange agreement a portion of the stock is donated back to the corporation, the par value of the stock issued may not be regarded as the cost of the property, and the proceeds from the subsequent sale of the donated shares is not "surplus." This is the familiar situation often raised in past years in mining promotions, but a not so common practice since the advent of the SEC. What is meant by "nominally?" What should the recorded "cost" be, if the par value of the stock is not permitted as a basis? What if the donation is not in accordance with any ascertainable agreement? Should the proceeds of the sale of the donated stock then be credited to paid-in capital or to the property account?

(7) The difference between the purchase and resale prices of a corporation's own common stock should be reflected in capital surplus. What is meant here by "capital surplus?" What if the debits exceed the credits; will there be a debit capital-surplus account? Should the capital paid in by one stockholder be paid out to another, as this rule would seem to authorize? Does not the repurchase price of shares at a figure exceeding paid-in value involve the equivalent of a dividend to the retired stockholder?

It would be manifestly impossible to devise rules to meet all possible contingencies. But the meaning and intent of these seven propositions is so obscure that they fail to cover with certainty even the simpler situations. Because of this obscurity and because they are presented without any supporting argument and without disclosure of the reasons that prompted them seven years ago, they must fail to be convincing. Each of them is dependent on many underlying accounting concepts which deserve careful study before being thus boldly confirmed. If the Committee does not repudiate Bulletin No. 1, it must look forward to continued denials of the implications of these seven rules or to the adaptation of any future concepts to the pattern which it has so hastily established.

BOND DISCOUNT

Bulletin No. 2, more ambitious than the Committee's first, takes up in some detail the subject of the disposition of unamortized discount on bonds retired and replaced by a new issue running for a longer term. This variety of transaction has occurred frequently during the depression years because new money has been cheaper than old. Three methods are outlined and the points cited by the Committee for and against each method may be summarized thus:

First method: charge to earned surplus

For	Against
Balance-sheet conservatism	Income understated; income statement has growing importance
Conforms to hitherto-accepted accounting doctrines	Creates an abnormal charge against income
Supported by decision of Supreme Court (*Great Western Power Company* v. *Commissioner*, 297 U.S. 543)	May exhaust available surplus
	Preferred stockholders may be discriminated against

Second method: charge over life of original issue

For	Against
Period of years instead of a single year	Not conservative
	Discount is a cost of terminating a disadvantageous agreement

Third method: charge over life of new issue

For	Against
In the past, freely permitted by regulatory bodies; hence permissible where prescribed	Not adequately supported by accounting theory
	Runs counter to generally accepted accounting rules
	No marked practical advantages
	Unconservative to carry over long period

For	Against
	No ground for assuming a benefit beyond life of old issue
	Exaggerates annual saving from refinancing
	No logical connection between discount on old issue and term of new
	Understatement of cost during remaining life of old issue
	Encourages transactions which are not, when properly viewed, advantageous

The Committee advocates the second method, permits the first, denies the third except where (1) prescribed and (2) qualified. It is interesting to observe that Professors Paton and Kester dissented from the Committee's findings but the Committee has not published their reasons. It may well be that their reasons are more important than the findings of the majority.

It is also apparent that a large portion of the Committee's argument rests on vague allusions to conservatism, accounting theory, accounting rules, logic, over- or under-statements of income, abnormal charges, growing importance of the income statement, and protection of preferred stockholders. Nowhere does the Committee make clear the meaning that these words are intended to convey, and it seems almost obvious that they must be interpreted as emanating from the emotions rather than from reason. If we could only assume that the accountant *must* be conservative, "sound" in his theory, amenable to the dictates of his governors, zealous in computing income "correctly," regard "abnormal" charges to income with abhorrence, agree once and for all that the income statement keeps growing in importance, guard the interests of preferred stockholders by retaining an earned-surplus account that might otherwise "fall to" be eliminated: if, indeed, the accountant could be thus emotionally equipped, he would be the tractable fellow the Committee, or the majority of it, seems to believe him to be.

At certain points in the bulletin the Committee gives the appearance of coming close to interesting subject-matter. It was at great pains to refute as best it could the third method which it regarded with the greatest distaste. On page 19 it states:

> An argument by which this method is sometimes supported is that the expense of retiring the old issue is a part of the cost of the new transaction.

But does the Committee proceed to argue against this heresy? It does, in the manner of the clenched fist:

> This argument seems to the Committee to be fraught with danger.

And so the argument is disposed of. Nothing further appears supporting or opposing it. Is the accountant to infer from this that all argument is dangerous, or merely that the present argument might have led him into a logical pitfall? Or what was the danger the Committee, in its omniscience, thought the accountant should be steered away from?

Apparently the idea of "accumulating" discount on bonds rather than "amortizing" it also approaches dangerous grounds. On this point the Committee comments:

> If accounts were used only by accountants, there would be much to be said in favor of treating liabilities as negative assets and applying to them a principle analogous to that of historical cost and amortization commonly applied to assets.

But the Committee, exemplifying the arbitrary and unreasoning approach of a boastfully practical man, did not "deem it opportune to discuss the theoretical soundness and practicability of adopting an alternative treatment of bonds which would recognize in some respects the nominal character of the terms 'principal' and 'interest'." Thus, while admitting merit to the notion of "accumulation," the Committee overlooked the possibility

of arriving at an entirely different conclusion by refusing to go back one or two steps into considerations that might have imperiled the particular expedient to which it felt itself bound to uphold.

Another noteworthy dictum of the Committee may be found in the final paragraph of the report (pp. 21–22):

If unamortized discount and redemption premium on bonds refunded is being carried forward and the debt is subsequently retired otherwise by refunding, the amount of the unamortized discount and redemption premium not theretofore written off should immediately be charged to income or, if the amount is so large that it would seriously distort the income for that year, to earned surplus.

In this statement the Committee has branched suddenly into another field by taking a stand against a charge to income "so large that it would seriously distort." When does a charge reach the distortion stage? Here again, the early adoption of a "rule" without giving it extended consideration is likely to impede if not make impossible any serious contribution by the Committee to accounting theory.

QUASI REORGANIZATIONS

Rule (2) on page 453 is amplified by Bulletin No. 3, the subject being limited, however, to "quasi reorganizations" where assets are restated downward and a deficit eliminated. The rule is misquoted in that the curious expression, "fall to be made," becomes "fail to be made" and is thus given a meaning opposite to the one intended.

Discussion in Bulletin No. 3 is indicated as relating to a "legitimate [lawful?] restatement of its [a corporation's] assets, stock, *and* surplus." It apparently is not meant to apply to absorptions of an operating deficit in paid-in surplus, or in surplus resulting from the scaling down of capital stock, although either action is one on which accountants might well take a firm stand.[1] The propositions advocated are (1) that the consent of stockholders should be secured for asset writedowns combined with capital-stock adjustments, although the methods by which the accountant can enforce the idea where the state law or the charter does not require it are not suggested; (2) no writedowns should be charged to "capital" surplus until earned surplus has been exhausted; (3) the writedown should not result in understated assets (and hence overstated profits in future years); (4) "capital" reserves may be set aside in the process of reorganization for future absorption of losses not now accurately determinable; and (5) earned surplus should thereafter be dated.

These "rules" are reasonable but in the course of their development it would have been helpful if the subject-matter could have been expanded and illustrated. The writedown of assets involves many points of which the ideas of accountants need clarification. Also, the subject of paid-in capital could have been amplified at this point and the responsibilities of accountants for stockholders' investment accounts more exhaustively considered. No bibliography is attached, although these matters have been frequently discussed in recent years.

Aside from limitations of scope and treatment, this bulletin is the most successful of the three. In future pronouncements it is hoped that arguments pro and con will be indulged in freely, that current literature applicable to the subject will be referred to and discussed, and that opposing ideas will not be cut short by calling them dangerous or inopportune. Finally, if criticisms from a wider group were solicited before publication, undoubtedly many of the faults inherent in the first three bulletins could be prevented.

E. L. Kohler

[1] See, for example, proposition 19 of the "Tentative Statement" of the American Accounting Association. The elimination of an earned-surplus deficit against contributions of stockholders is an application of paid-in capital and is also a "quasi reorganization" which should require stockholders' approval.

BOOK REVIEWS

Business Cycles, a Theoretical, Historical, and Statistical Analysis of the Capitalist Process. (2 volumes.) Joseph A. Schumpeter. (New York: McGraw-Hill Book Company, Inc., 1939, Vol. I, pp. xvi, 448. Vol. II, pp. ix, 647. $10.00.)

To Professor Schumpeter the analysis of business cycles means the analysis of the economic system under which we live, namely capitalism. In studying this interesting though difficult problem he has subjected capitalism to an exhaustive theoretical, historical, and statistical analysis. The countries included in the study are the United States, England, and Germany. The period covered is from 1787 to the summer of 1938.

In the main the first four chapters are devoted to an explanation of the "model" used in the study. This "model" is represented by society in a state of equilibrium which may be reached under perfect competition. The value of such a plan of attack on business cycles, of course, is well known. The factor that causes disequilibrium is, according to Dr. Schumpeter, innovation, the importance of which he has stated in other of his writings, and which may be defined as "doing things differently" but not including inventions. Professor Schumpeter is very careful to point out that invention is not synonymous with innovation.

The cycles caused by innovations not being "smoothly absorbed" are of varying durations. The long cycles are called "Kondratieffs" and are approximately 60 years in length. The intermediate cycles are called "Juglars" and have a duration of about 10 years. The shortest cycles, of some 40 months, are named "Kitchins." These names were used since individuals with the same names discovered these particular cyclical lengths. The "Kitchins" are located by analyzing numerous time series, the others by historical analysis.

The statistical technique employed in analyzing the time series is that suggested by Professor Frisch and is explained in Chapter V. This method makes possible the decomposition of a time series so that the various movements contained therein may be studied separately and in relation to each other. The method is supplemented by the theoretical and historical material in other chapters. Additional examples of the application of this method are shown in Chapter VIII.

The remaining two chapters in Volume I contain an excellent economic history of the three countries for the years 1786–1842 (Chapter VI) and 1843–1913 (Chapter VII). Woven into this history are numerous illustrations of the effect of innovations on agriculture, commerce, industry and economic progress in general. Thus the importance of innovation as the cause of cyclical change is strengthened in a most interesting manner. These chapters also contain the dates of the "Kondratieffs" and "Juglars" for these periods but they are given in paragraph form and must be tabulated by the reader if he wishes to retain the dates. For the "Juglars" in particular it might have been better to place their dates in a table, perhaps at the end of each chapter.

Chapters VIII to XIII inclusive in Volume II contain additional background for the study of business cycles. In Chapter VIII the price level and the difficulty of its measurement are discussed at some length, as well as the effect of innovation on the price level. In Chapter IX Professor Schumpeter analyzes a number of statistical series of physical quantities and near the end of the chapter discusses unemployment in the United Kingdom. Chapter X covers "Prices and Quantities of Individual Commodities." Chapter XI, "Expenditure, Wages, Customers' Balances," begins with Dr. Schumpeter's conception of money which he states may be "... linked to some commodity," but "... never is a commodity ... ." (p. 544). Chapter XII is devoted to a study of various rates of interest in numerous markets. The final chapter in this group, Chapter XIII, is entitled "The Central Market and the Stock Exchange." In this chapter the author associates central-banks with New York banks and states that the New York banks acting as bankers' banks were for many years before the World War, "... in particularly close relation to stock exchange speculation" (p. 665). Other important conclusions of this chapter with which most will agree are: (1) in the "... historical survey the cycles in our three countries were found to be much in step" (p. 666); (2) "... that upward movements on the stock exchange will, in general, and in the absence of unfavorable external factors, set in earlier and gather force more quickly than the corresponding upward movements in business ... " (p. 685); and (3) "Since stock speculation does not absorb funds, it must be extremely difficult to stop or restrain by any of the ordinary tools of central banking" (p. 691). Where possible in the above chapter the dates of the phases of the three types of cycles are given.

The last two chapters in Volume II cover the period from 1919 to 1938. Chapter XIV includes the years "1919–1929," and the final chapter entitled "The World Crisis and After," includes the remaining years. The purpose of these chapters is "... to answer the question how far the cyclical process of capitalist evolution, as analyzed for the 130 years that preceded the World War, can be proved to have persisted in the postwar period, and to see how our model works under the conditions and with the richer material of that period" (p. 692). In answering this question Professor Schumpeter employs the same procedure as in the earlier chapters. The period 1919–1929 is first analyzed historically, after which the behavior of time series during the period is studied. As noted above the period of the World War was excluded. The reason given by Dr. Schumpeter is that "... those years were dominated by 'external factors' to an extent that makes their figures valueless for our purpose" (p. 692). Near the end of the chapter under Section V, "Central Banking in the United States and England" the author gives his conclusion concerning the part played by the Federal Reserve System during this period. He states, "... that the cyclical processes of the period were not substantially affected by the policy of the reserve system" (p. 901).

In the final chapter the economic policies of the

three countries for the period 1929–1938 are studied. Of course considerable emphasis is placed upon the great depression, particularly in the United States. The seriousness of the 1932 depression was apparently attributable to the "... coincidence of depression phases of all three cycles" (p. 907). In addition to this explanation Professor Schumpeter also states, "Realizing from historical observation the extent of the revolution that had occurred in the industrial structure and was in the act of upsetting its system of values, shall we be surprised at the emergence of a situation in which perhaps three-quarters of all businesses in the United States (including farms) had to face the necessity of an adaptation that threatened them with economic death? And is there really much to object to in the statement that this situation was the fundamental fact about the world crisis, compared with which all other factors, however important, were after all but mitigating or accentuating accessories?" (p. 908). It is also interesting to note in this connection that while Dr. Schumpeter believes that "Capitalism and its civilization may be decaying, ... or tottering toward a violent death ... the world crisis does not prove it, and has, in fact, nothing to do with it" (p. 908).

There is considerable discussion of the recovery policy in the United States and the conclusion is reached that the following did in one way or another promote recovery: (1) the Banking Acts of March and June 1933, (2) the NRA and AAA, and (3) Federal spending. With regard to devaluation and a change in the price level Dr. Schumpeter states that it is "... naïve to believe that redefining the gold content of the dollar would per se change the price level in the same proportion—a curious survival from the days of the commodity theory of money" (p. 999).

Volume II closes with a discussion of the reasons why the "economic engine" is not performing according to its old standard in the United States. The principal reason appears to be that investment opportunities are gradually vanishing. This is, according to Professor Schumpeter, because of the decrease in recent years of the "capital supply" caused by higher taxes in the higher income brackets, the recent labor policies making for higher wage rates, and by recent attacks on the management of big business. These plus the tendency toward reform have given capitalism little chance to perform as in the past. The final explanation may be that we are passing through a transitional stage in economic progress, the end of which cannot be seen at this time.

While many economists will undoubtedly hold to their individual theories even after reading these two volumes, there is no denying the fact that the importance of innovation as a cause of cyclical change has been greatly enhanced by their publication. In both the historical and statistical analyses of the three countries Professor Schumpeter has offered scores of illustrations of the effect of innovation on economic progress. The author's labors have been indeed a welcome addition to our knowledge of business cycles. For the benefit of those interested in economic planning, Dr. Schumpeter has this to say in the preface, "I recommend no policy and propose no plan." There is one appendix containing a "Description of the Statistical Material Embodied in the Charts," of which there are 60 scattered throughout both volumes.

RAYMOND F. BLACKBURN
University of Pittsburgh

Theory and Mechanics of Accounting. Leo A. Schmidt. (New York: Prentice-Hall, Inc., 1937, pp. xvi, 475. $3.60.)

This book is a revision and enlargement of the authors' *Mechanics of Accounting*, published in 1929. It consists of approximately 300 pages of explanatory matter, 145 pages of problems, 21 blank pages (due to the practice of beginning each chapter on the right-hand page), and an index of 9 pages. There is no practice set material available.

The volume is divided into six parts. With the exception of journal entries, the accounting cycle is presented in Part I, entitled "Fundamentals of Accounting." The balance sheet approach is used. Topics are introduced in the following order: the balance sheet; transactions as they affect the balance sheet; setting up the T-account ledger (debit and credit); analysis of capital-account changes; need for expense and income accounts and the closing of these accounts; sales, purchases, and inventory accounts; trial balance; adjustments; profit-and-loss statement; and the work-sheet.

Part II, entitled "The Development of Technique," is devoted to a discussion of the general journal, special-column journals, controlling accounts, specialized books and the voucher system. The concluding chapter in this part consists of seven problems (each with varying types of journals) designed to generalize the student's knowledge of technique, assuring the mastery of varying systems of accounts.

"Valuation Problems" is the title of Part III. The valuation of all types of assets and liabilities is considered in more detail than in many first-year texts. The usual points of partnership and corporation accounting are considered in Parts IV and V, respectively. Part VI on "Management Uses of Accounting," consisting of four chapters, is devoted to the perfection of statements, analysis of a single year's statements, analysis of the statements of successive periods, and analysis of statements by comparison with standards.

A hint as to the method of presentation and development of individual topics is indicated by a statement in the preface, as follows: "It has been the author's experience that the student of accounting learns very little by merely reading a book or hearing a lecture, and that, practically speaking, the student retains only that which he has also experienced in the form of a concrete problem which he has had to solve. The problems in this book parallel the text closely.... The student should ... be required to work *all* of the problems, if possible. This procedure provides approximately the right amount of work for a one-year four-credit course, if the common rule of 'two hours of preparation for every class hour' is taken seriously."

The reviewer is in hearty agreement with the theory

that the student of accounting must work problems, and plenty of them, if he is to gain even a reasonable mastery of the subject. The problems (almost one-third of the book) are realistic and excellent. Though the nature and amount of problem material available in an elementary textbook is important, the descriptive and explanatory matter must not be underevaluated. As a whole the textual matter of this volume is exceptionally good, but at a few points it is rather brief and sketchy. For instance, less than three and one-half pages is devoted to the profit-and-loss statement; schedules of customers' and creditors' accounts are required in problems (p. 138, 142) without any illustrative or descriptive material having been given in the text; entries for bad debts and depreciation are required in problems on Chapters 6 and 7 while these topics are not presented in the text until Chapters 23 and 27, respectively, are reached. (Allowances for depreciation are shown on a work sheet in Chapter 14, being explained briefly in a footnote.)

Exception must be taken to the method of classifying items on the balance sheet. Throughout the volume, assets are classified as current, fixed, and investment, and liabilities are classified as current and fixed. This means that deferred incomes are to be shown on the balance sheet as current liabilities (p. 87) and deferred expenses as current assets (p. 22, 442, and others). The classification recommended does not appear to be in line with common practice or the ideal presentation.

The showing of unpaid subscriptions as an asset on the balance sheet (p. 365) does not seem to be the preferable treatment, and certainly the author errs in stating that the sales account is a mixed account (p. 57). If not absolutely incorrect, the following statement would surely mislead the beginning student: "For practical purposes it may be assumed that, in the absence of such special circumstances as the expansion of the business or the paying off of fixed liabilities, the period's operations can be summarized by an entry debiting cash and crediting surplus for the amount of the net profit, and that the cash thus brought in is sensibly available for withdrawal as dividends (p. 372)."

The author is to be commended for using the terms "Allowance for Depreciation" and "Allowance for Bad Debts" rather than the misnomers, "Reserve for Depreciation" and "Reserve for Bad Debts." Of course he is careful to explain that the latter terms are often used in practice. The use of "equities" on the balance sheet in place of the customary "liabilities and net worth" is not objectionable.

In spite of the few criticisms noted, the reviewer believes that Professor Schmidt's book compares favorably with the leading elementary accounting texts. The ideas expressed in it are clearly stated and it is well printed and bound.

George Thomas Walker
Southwestern Louisiana Institute

Business Law, Principles and Cases. Harold F. Lusk. (Chicago: Business Publications, Inc., 1939, pp. XVIII, 1270, $4.50.)

This is a revised edition of a book of the same title published by the author in 1935. The revision has been so thorough, however, that it should be considered as a new book. Teachers of business law who used the first edition will appreciate the additional case material in the present volume and the manner in which the cases are distinguished from the author's discussion of principles. Those who are unfamiliar with the earlier work will be impressed by the organization of material in the development of the subject, the quantity and pertinence of the cases selected and the scholarly treatment accorded each topic.

The book is divided into ten parts, of which the first is introductory in character, and the other nine deal respectively with contracts, property, sales, security transactions, negotiable instruments, agency, partnerships, corporations and insurance. The section on insurance replaces the one devoted to insolvent estates in the first edition. Important to the business man as is the subject of insurance, it is to be regretted that the author believed it desirable to omit from the present edition his discussion of the legal aspects of insolvency and bankruptcy.

Too frequently text books on business law written for the student of business or the layman plunge into an exposition of legal definitions and principles without offering the student an adequate background for his study. Professor Lusk has wisely devoted two introductory chapters to the functions and sources of law, its historical development and to the parts played by the various types of courts in its administration. Further attention to the historical aspects of the development of the law relating to each of the major topics of the book is given in introducing them.

The author's discussion of legal principles is amply supplemented by illustrative cases, each of which is closely identified with the text to which it is pertinent. In nearly every instance the opinion and judgment of the court is quoted in full. This treatment of the subject allows the instructor considerable latitude in the manner of his teaching. He may emphasize the rules of law stated in the author's discussion and use the quoted decisions merely as illustrations; he may use the cases primarily as a starting point from which to guide the class in the determination of legal principles and rules; or he may take a middle ground and use both the discussion of the author and the cases as source material for inculcating in the minds of students the principles of law and their application to business situations.

The choice of cases is, on the whole, a happy one for this third method of instruction, for in many of the decisions quoted the courts' discussions of the historical development of the pertinent legal principles or of the underlying theories of law provide the student, not only with an authorative legal background, but with outstanding examples of legal analysis. The value of the latter as aids in his own consideration, not only of legal problems, but of all propositions which require clear thinking, cannot be overemphasized.

In the selection of cases the author has used unusual care. Little fault can be found with their direct applicability to the principles they are intended to illustrate. As has been pointed out, many of the quoted opinions

are extended discussions of the principles of law involved. Every state in the Union, except Colorado, Nevada and New Mexico, is represented by the decisions quoted. Forty-four of the approximately 425 cases included are decisions of United States federal courts. Only four British cases are used.

Evidence that the legal principles discussed are currently applicable is to be found in the fact that nearly three-fourths of the cases selected were decided since 1920, while slightly less than one half involve decisions rendered since 1930.

It is also worthy of note that well known concerns were litigants in a substantial number of the cases used. Such names as American Railway Express Co., American Surety Co., Westinghouse Electric Manufacturing Co., Chandler Motor Car Co., United Fruit Co., Vacuum Oil Co., Commercial Credit Co., Ford Motor Co., General Motors Acceptance Corporation, Victor Talking Machine Co., Home Insurance Co., Iron Fireman Coal Stoker Co., New York Life Insurance Co., New York, New Haven and Hartford Railroad Co., Kelly-Springfield Tire Co. and Goodrich Tire and Rubber Co., are likely to be known to every student required to use the book as a text, while many other names identified with the cases will have local significance of equal interest to many readers.

The fact that four fifths of the book consists of cases may lead many persons to look upon it primarily as a case book. This would be a mistake, for, important as is the case material, the principles and rules of law applicable to the topics discussed are ably set forth by the author, independently of the decisions and court opinions quoted. Nearly five hundred questions and problems enable the student to test his ability to analyze the facts of a given situation and to apply correctly the principles of law discussed in the text and cases.

Students and practitioners of accounting will find that, except in the field of insolvency and bankruptcy, Professor Lusk's book contains adequate material as a basis for preparing for the law section of C.P.A. examinations. Teachers of accounting theory and practice will find it worth while to review particularly Parts III, VI, VIII and IX, devoted respectively to property, negotiable instruments, partnerships, and corporations. Instructors in auditing will benefit from a careful consideration of every section of the book. Practicing accountants and business men generally will find it a convenient manual of reference in connection with the fundamentals of law concerning business operations, but should be reminded that the book does not replace the professional lawyer, though it should assist in making the businessman aware of situations where the services of the lawyer should be employed.

An appendix contains a section on "How to Use Law Books," supplemented by a classified bibliography, and the full text of the Uniform Sales Act, The Negotiable Instruments Law and the Uniform Partnership Act.

Norman L. Burton

University of Buffalo

Federal Income-Tax Course. Prentice-Hall Editorial Staff. (Prentice-Hall, Inc., 1939–1940, approx. 1,200 pages. $5.00 for College Edition.)

A. B. Alcott has said "That is a good book which is opened with expectation, and closed with delight and profit." That was my feeling after carefully examining the current edition of the Prentice-Hall Federal Income Tax Course. The last few revisions of this text have been progressively clearer in the presentation of the most important sections of the Revenue Act. There are twenty-seven chapters devoted to income taxes, and three chapters covering the most significant phases of social security, estate, gift, excise and miscellaneous taxes.

As a unit the current edition of this text presents to the student the most teachable condensation of federal taxes I have seen. It contains:

1. Thirty pellucid lectures so abundantly illustrated that students readily grasp the essentials.
2. An abundance of briefly summarized references to actual rulings and decisions by the Bureau of Internal Revenue, the Board of Tax Appeals and the Courts, selected by the editorial staff with discriminating care.
3. A workbook of problems sufficient for a two hour a week course for the school year. Usually the problems are the essence of actual cases that have led to basic decisions. The workbook is a new feature of the course.
4. A reprint of Regulations 101.
5. The new Internal Revenue Code and appendix complete with the 1939 Amendments.

Many taxbooks are weak because the authors do not know what to put at the beginning. In the teaching of accounting fundamentals most texts start with a simple presentation of the accounting statements. If that is sound pedagogy, then it is equally important that students of income tax be given a complete but simple tax return for individuals at the very beginning of their study of the field. Prentice-Hall have done this. They have also inserted periodically coördinating problems to tie together the individual parts of a progressively intricate subject matter. This too makes an appeal to the teacher.

The section on partnerships has been expanded to include *exact* percentages in the determination of the distributive shares of partners. In previous editions only residual percentages were used to distribute such items as contributions and capital gains and losses. The emphasis placed on the computation of the earned-net-income credit based on figures shown by the statement of profit and loss instead of the tax return figures clears up another of the troublesome problems arising out of the partnership return.

Teachers of federal taxes are assisted further by an Instructors Manual which contains solutions to all of the problems, and this year the staff has also prepared a summary of each of the chapters. This summary is particularly helpful to those teachers whose schedules are full and time to prepare their several courses is at a premium. The manual contains another useful feature—

a Schedule of Lectures indicating which problems are best for class discussions and which should be submitted to the instructor on perforated sheets provided in the workbook. If the time which can be devoted to the course is less than sixty hours a year, suggestions are given concerning which paragraphs of the lectures may be omitted without seriously interfering with the course development. All of these features make for elasticity.

On request, Prentice-Hall furnish students with the necessary governmental forms on which to place the solutions to the long problems on individuals, partnerships, fiduciaries, and corporations.

Here also is an effective tool and mute counselor for the practicing accountant, lawyer, trust officer, and business executive. I am sure that this group would find it helpful if a section on minimizing taxes were included.

ROBERT D. AYARS
University of Pittsburgh

Principles of Accounting, Fourth Edition. R. B. Kester. (New York: Ronald Press Company, 1939, pp. xx, 703. $4.)

This is a thorough revision of Dr. Kester's popular work, the first edition of which appeared in 1917. Certain combinations of chapters have been made, and two new chapters added. Most of the text material has been rewritten and each of the several chapters includes much new material to meet the increasing demand for better-trained accountants. The net result of these changes is a reduction in the number of chapters from 40 to 30, and an increase in the number of pages of text from 618 to 675.

The first fifteen chapters of the book are elementary, starting with the simplest of business transactions and progressing on through the various accounts affected to the final trial balance, closing entries, work-sheet, profit-and-loss statement and balance sheet. Chapter 15, one of the new chapters, contains a comprehensive reference problem which gives in detail a series of ordinary transactions of a single proprietorship for a period of one month and clearly illustrates the correct entry for each one of these transactions as it occurs.

These elementary chapters are followed by a discussion of other types of business organizations and a study of the accounts peculiar to them; chapters 16 and 17 being devoted to partnerships and chapters 18–23 to corporations. The corporation, with its continuity of existence and limited liability of stockholders, having been the popular type of business organization for many years, the tendency of text-writers has been to limit their treatment of partnerships. But due to high taxes and other restrictions now imposed on corporations increasing consideration is being given to the use of the partnership form of organization, and to meet this situation the organization of and accounts peculiar to partnerships are treated in much more detail in this than in former editions.

The subjects covered by chapters 24–26, valuation of balance-sheet items and analysis and interpretation of financial statements, and by chapter 30, accounting for executive control, are somewhat more advanced than those covered by other chapters of the book and should be of interest to experienced accountants, controllers, and business managers as well as to students.

Chapter 27, another new chapter, deals with problems peculiar to branch and parent and subsidiary-company organizations, and the remaining two chapters 28 and 29, deal with control of stock-in-trade and accounting for sales and consignments.

The practice material, which is new and published under separate cover, consists of 234 pages of the usual type of short disconnected problems and longer connected diaries of business, all carefully correlated with the text.

The excellent text material, in which the major emphasis is placed on theory, with adequate illustrations of its practical application, is well organized and presented in a way to give the elementary student a thorough understanding of accounting principles and procedure, and is well adapted to a one year college or technical school course. This reviewer congratulates Dr. Kester on his accomplishment.

JAS. M. MCCONAHEY
University of Washington

Audit Practice Case. Harvey G. Meyer. (New York: Prentice-Hall, Inc., 1939. $3.75.)

As the title suggests, this is an audit practice case and not a textbook on auditing theory. The Audit Practice Case consists of two parts: (1) The Problem for solution; (2) The materials included to aid in the solution of the problem. The problem requires the preparation of the auditor's working papers and the auditor's report for the current fiscal year for a printing and supply company of average to small size which has no unusual problems. The materials include a pad of vouchers and invoices, set of procedures and explanations, books of original entry and other records, ledgers, miscellaneous documents and information, as well as the auditor's working papers and the auditor's report representing last year's work.

The author has attempted to present a problem for solution with sufficient materials so organized and arranged "that the student will be able to plan and conduct his work under conditions reasonably approximating those found 'in the field'." In the opinion of the reviewer, he has been quite successful in this endeavor.

The practice case has a number of commendable features. The inclusion of last year's working papers and the auditor's report is an aid to the student, since it illustrates the technique required in the preparation of current working papers and the form and content of the auditor's report. Although a larger amount of material is included in this practice case, it is unusually well organized and arranged in bound units for convenient use by the student. Detailed audit procedures are presented with the materials at the place and time the student needs them, thus enabling the student to grasp their significance more easily and perform his work with less supervision than otherwise would be required. The practice case may be used without a textbook, or used to supplement any standard auditing

textbook on theory, practice or procedure. The work has been carefully divided into fourteen assignments by the author and may well be adapted to various time schedules.

In the opinion of the reviewer, the author has provided a practice case that is practical and teachable. Its use with a standard text on auditing theory should greatly strengthen the usual course given in auditing which, too often, has been little more than a review of accounting theories. D. M. BEIGHTS

University of Florida

New York Laws Affecting Business Corporations, annotated and revised to June 20, 1939. (New York: United States Corporation Company, 1939, pp. xxxii, 545. $2.)

In view of attempts currently being made by many counsellors-at-law to curtail what they believe to be accountants' activities in the field of law, it seems desirable to re-emphasize what was said in previous reviews of earlier editions of this most excellent manual.

No accountant worthy of being addressed by such title—and I believe that the majority ever have in mind as a practice guide the code of ethics of the profession—knowingly will practice law in violation of the limitations laid down legally, by consent of the leaders in the legal profession, and by common sense.

But in order to do his professional work satisfactorily and properly, the accountant must be familiar with certain phases of the law—those which will permit him to issue his usual reports in harmony with the facts uncovered. This is not a new idea. The first syllabus issued by The State Education Department of New York about 1900, contained an elaborate outline of legal principles accountants should know and apply in doing their professional work. Such syllabus was issued under authority of the then Board of Regents most of the members of which were attorneys. Further, the C.P.A. examination prescribed under the rules for applying the law of 1896 (the first C.P.A. Act), and the ideas of which still are in force, provided that one part of the examination out of the complete four portions should be on the laws of business, and should have a grade weight equal to that of each other portion—25% of the total possible grade.

This being so, then both for the examination and for practice, a working knowledge of substantive law seems essential. And, as we all know, great emphasis is placed upon securing a knowledge of the principles of business—corporation law in force in each of the states in which one's accounting practice is carried on.

For New York, the book which seems to be of most usefulness in this connection is the one referred to herein. As usual, it contains the "Business Corporation Law, the General Corporation Law, the Stock Corporation Law, the Membership Corporation Law, and numerous articles and sections of other chapters of the Consolidated Laws, relating to Business Corporations." These last-mentioned articles and sections are concerned mostly with the Tax Law, Penal Law, and recording and filing fees.

This publication is prompt in its appearance after the close of each legislative session; it is accurate in its content; and it is compact—the twentieth edition contains only 543 pages in all.

The legislature, just closed, adopted twenty-five separate acts related to corporations. To a substantial degree, these affect some thirty-five sections of the corporation laws of this state as above mentioned.

It is not to be expected that a practicing accountant must be an expert on all laws affecting business corporations. But it seems reasonable to assume that he should have such a knowledge of the laws of current application in order to harmonize his reports with their requirements, and that he will know when to apply for competent legal opinion from counsel upon any matter concerning which a doubt has arisen as to its effect upon the books of account.

The book is well annotated, as usual, the annotations relating to the cases decided in the Court of Appeals. Further, a table of cases has been included as a new feature in the latest publication; this may be of interest to some. Lastly, the price is reasonable.

GEORGE E. BENNETT

Syracuse University

Accounting Principles. James O. McKinsey; revised by Howard S. Noble. (Cincinnati: Southwestern Publishing Co., 1939, pp. x, 885. $3.75.)

The present volume is a revision of a similar work published in 1935. As such it has carried forward the generally good work presented in the first edition. An examination of the new volume shows that the first few chapters have been made more compact; separate chapters have been written for departmental and for branch accounting. These were formerly in one. There is a special chapter on budgets considerably expanding the material formerly contained under the heading of Accounting & Management. There is also a new chapter on personal accounting, and one on taxation.

Of the new material, the chapters on personal accounting and on taxation seem to be of rather doubtful value. A student who has gone through the rest of the book will find this personal accounting a rather elementary proposition. The chapter on taxation is fairly general, and the parts that are specific may very well be out-of-date shortly.

The question of the proper content of a first-year book in accounting is always disturbing. It seems to this reviewer that the book lacks a certain balance. Specifically, there are three chapters on manufacturing accounting of which two chapters deal with job-order and process costs. This emphasis on cost accounting in a first-year text seems rather overdone. On the other hand there is only one chapter on valuation and that treats only of depreciation and bad debts, and does not cover even in an elementary way the valuation of different balance-sheet accounts. Chapter 33 on Accounting and Management, while good, deals largely with auditing, which ought to be reserved for more advanced work. Chapter 34 on problems of insolvency is certainly one

of those special topics that should be reserved for some more advanced course.

To all this the author replies that a small percentage of college and university students go beyond first-year accounting. This might appear a valid argument, but is it? Isn't it a case where a little knowledge is a dangerous thing? A business man with a smattering of accounting can certainly make life miserable for the professional accountant. Might it not be well then to recognize the fact that a thorough training in fundamentals and the problem of valuation is more important than a smattering of costs, taxes, auditing, etc.? These are all specialized fields to be studied by those who really wish to know something about them.

The publisher has done a good job by using a more readable type face. One could wish, however, that the illustrations done in script had not been made by some one addicted to the Spencerian school of handwriting, but rather by one whose handwriting exhibited a little more maturity. Certainly, the typed statement of Profit and Loss (p. 277) is much more professional looking than the prettified statement shown in script earlier in the text (p. 53).

Generally speaking, the bookkeeping and accounting techniques employed are good. Naturally in a book of the size of the present one, differences in viewpoint as between author and reviewer are bound to be present. Thus the six-column statement (p. 75) seems rather useless, since it is followed shortly (p. 98) by the 10-column work-sheet. The treatment of inventories on the work-sheet seems rather involved, which is also the case with the closing entries (p. 122). With a work-sheet before him, it is hardly necessary for the bookkeeper to make a separate closing entry for each nominal account. The only advantage of the method is that it produces a profit-and-loss account posted in detail. That, however, is of little value, since information concerning profit-and-loss is gleaned from the statement, not from the account.

The increasing size of first-year accounting texts clearly indicates the continuing progress being made in the new profession of accountancy. More and more material that formerly belonged in advanced courses has to be compressed into the first year, in order to allow more intensive work to be done later. The book under review clearly exhibits this tendency. Pedagogically it is a sound piece of work, dealing primarily with techniques and illustrating these with concrete exhibits, which, subject to the comments made above, leave little to be desired. Such criticisms as those herein expressed reflect merely personal differences of opinion between author and reviewer. Without such differences life could be dull indeed.

THEODORE LANG

New York University
Graduate School of Business Administration

The Dynamics of Automobile Demand, Statement of the Problem by S. L. Horner, Factors Governing Changes in Domestic Automobile Demand by C. F. Roos and Victor von Szeliski, Hedonic Price Indexes with Automotive Examples by A. T. Court, Significance of the Findings by S. M. DuBrul. (New York: General Motors Corporation, 1939, pp. x, 139.)

The study, which is a broad analysis of the many factors affecting automobile demand, was presented at the December 1938 meetings of the American Statistical Association and the Econometric Society. The particular demand studied was for new passenger automobiles which is derived from the more primary demand for individual transportation. Since the automobile is a durable good, consumers' car stocks are important in determining new-car purchases, the concept of a variable maximum ownership level, affected by car stocks and current conditions of income, price, and operating costs was developed. It was found that when the variable maximum-ownership level was attained a decrease in national income occurred; a decrease in sales and perhaps even liquidation of consumers' car stocks would then be necessary.

The study illustrates the complexity of the concept of demand. In addition to car stocks and income it was necessary to consider such things as the age distribution of car stocks, allowances offered by dealers, financing terms, highway carrying capacity, car-servicing facilities, operating costs, the price of competing goods, dealers' used-car stock, and the style appeal of new offerings. Even the anticipation of the course of such future events as price and model changes had to be considered.

Price is not a simple dollar figure. The section on hedonic price indexes discloses the difficulty of constructing a price index which will make possible valid price comparisons between articles that change greatly during periods of time. "Since the validity of any price comparison rests upon pricing articles comparable in terms of useful qualities, the prerequisite of any realistic price index where exactly identical articles are not available for successive and overlapping periods of time is product specifications which actually reflect useful and desirable qualities." The automobile is certainly an article which changes greatly during a period of time and the problem of price comparison is thus made difficult.

The study is realistic in broadening the notion of demand to include the many factors besides price and income which affect it. Other factors were found more important than price—a condition which seems to be characteristic of durable goods in the hands of users. This introduces complexities which must be accepted as part of the consequences of a "high-level economy."

The statistical evidence presented in the study is complete and at times appalling. It is to be hoped that additional studies of other industries of a similar nature will further extend our knowledge of this highly important and little-explored subject. Certainly additional information about the dynamics of demand is essential to intelligent budgeting, pricing, and cost distribution.

HARVEY W. HUEGY

University of Illinois

UNIVERSITY NOTES

University of Alabama

S. Paul Garner, C.P.A., and Ph.D. of the University of Texas, has been added to the staff as associate professor of accounting. C. H. Knight has been advanced to the rank of professor of accounting. Professor Knight is currently secretary of the Alabama Society of Certified Public Accountants. In collaboration with professor Newlove of the University of Texas, professor Garner is engaged in writing a text on cost accounting.

A course in theory of accounting has been offered for the first time this year.

University of California at Los Angeles

Five graduate seminars are now offered: two semesters each in accounting and marketing, and one semester in finance. Professor Frisbee is in charge of the accounting seminar. The enrollment in business administration during the current semester numbers 931, which is 10% above last year.

Candidates for the C.P.A. in California, beginning in November, 1943, must have a junior certificate from an accredited junior college or university.

University of Cincinnati

Howard Knapp, national president of N.A.C.A., is offering a course in advanced cost problems in the evening school. Mr. Kenneth Thompson of the evening school staff received the highest grade in the state of Ohio C.P.A. examination given in May, 1939. Professor A. W. Holmes is conducting a survey of evening courses in accounting.

University of Illinois

Professors C. F. Schlatter, E. E. Theiss, and H. H. Bailey are currently serving as officers of the Decatur (central Illinois) chapter of N.A.C.A. Besides being reappointed as chairman of the A.I.A. committee on governmental accounting, Lloyd Morey has also been elected a director of the Illinois Society of C.P.A.'s. Professor A. C. Littleton is continuing his membership on the committee on accounting procedure of the A.I.A., and this year he is also on the educational committee of the Illinois Society of C.P.A.'s. Professor A. T. Scovill has been appointed a member of the board of examiners of the A.I.A.

The Accounting Club has a membership of over 400 students, and continues as the most active student club on the campus.

Indiana University

Geoffrey L. Carmichael, assistant professor of accounting, received his C.P.A. certificate in June, 1939. Mr. W. F. Vendley of the accounting staff has transferred to Texas A. and M. College as instructor in accounting.

University of Iowa

The following instructors in accounting have left the staff: E. B. Austin, to enter public accounting in Des Moines; and H. W. Wright, to join the staff of the University of Washington at Seattle. Replacing these men are R. G. Ashamy from the University of Illinois, and J. V. Fordon from the University of Washington.

Professor H. B. Eversole has been elected a trustee of the Iowa Society of C.P.A.'s.

University of Missouri

An accounting club composed of undergraduates numbering 41 holds semi-monthly discussion meetings. Club members subscribe to the Accounting Review.

Montana State University

The school of business held its second tax conference in conjunction with the annual meeting of the state society of C.P.A.'s. Lincoln G. Kelley, president elect of the A.I.A. addressed the conference. Dean Robert C. Line was in charge of arrangements for the conference.

The College of the City of New York

Studies under preparation are: "Accounting Requirements of the S.E.C.," by Dr. B. B. Greidinger; a text on advanced accounting by professors E. I. Fjeld and L. W. Sherritt. The latter is on leave of absence for 1939–1940 in order to work on these volumes.

Publications of the staff were: "Financial Statement Analysis" by John N. Meyer; "Estate Accounting," with cumulative supplement and review question and problems, by Emanuel Saxe; "Prentice-Hall New York Tax Course," by Stanley B. Tunick with the assistance of the editorial staff of the publishers. H. L. Kuntzelman was one of the contributing authors of "Corporate Financing and Consolidation," a book

prepared by Professor L. D. Starkweather of New York University.

In the evening division a new course is offered entitled "Accounting Under the S.E.C.," with Dr. B. B. Greidinger as instructor.

Ohio University

Professor Ernest E. Ray received his C.P.A. certificate recently.

University of Oregon

The state society of C.P.A.'s is undertaking steps to set up standards of audit procedure, and is also studying accounting and auditing problems peculiar to municipalities.

University of Pennsylvania

Robert D. Armstrong has left for Gettysburg College to serve as instructor in accounting. Additions to the staff for part-time instruction are: W. R. Gordon, statistician in the treasurer's office of the university; J. N. Abbott, formerly on the staff of the Federal Works Agency, Washington, D. C.; and J. Craig Aiken, who is with the extension center at Reading.

Jeremiah Lockwood was advanced to rank of professor of accounting. Robert B. Mitchell was advanced from instructor to assistant professor. He received the Ph.D. degree in June, 1939, and his research subject was "financial analysis of American stock fire insurance companies—1926 to 1936."

Temple University

Professor S. K. Atkinson addressed the Reading chapter of the N.A.C.A. on November 17. The subject discussed was "appraisal of management's position in view of recent changes."

University of Tennessee

Returning to the staff is J. D. Goeltz who was studying at Columbia University last year. Part-time work in public accounting during this winter has been arranged for outstanding senior students. Professor H. G. Meyer's book entitled "audit practice case" was published in August as part of the accounting series of Prentice-Hall Inc.

A. and M. College of Texas

Professor T. W. Leland, head of the department of accounting and statistics, was re-elected secretary-treasurer of the state society of C.P.A.'s. Mr. H. A. Dulan was elected secretary of the Texas Association of University Instructors in Accounting.

University of Texas

J. B. Pope has accepted a position with Arthur Andersen and Company. Professors G. H. Newlove, C. Aubrey Smith, and J. A. White are authors of a new book entitled "intermediate accounting" which was published recently.

University of Vermont

Professor L. L. Briggs, editor of the Accountants' Digest, is acting head of the economics department this year.

AMERICAN ACCOUNTING ASSOCIATION

24th Annual Meeting
Adelphia Hotel, Philadelphia, Pennsylvania
December 28-29, 1939

First Session—9:30 A.M., December 28

CHAIRMAN: John K. Mathieson, President, The American Institute of Accountants

TOPIC: Accounting Research

PAPERS:

"The Relation of Accounting to Social Science Research," Ralph C. Epstein, Dean, School of Business Administration, University of Buffalo

"Research in Accounting," Andrew Barr, Chief Accountant's Office, Securities and Exchange Commission

"Accounting Research—Objectives and Methods," Thomas H. Sanders, Harvard University; Director of Research American Institute of Accountants

Second Session—2:00 P.M., December 28

CHAIRMAN: E. L. Kohler, Controller, Tennessee Valley Authority; Editor, THE ACCOUNTING REVIEW

TOPIC: Federal Accounting Practices

PAPERS:

"Recent Developments in Federal Administrative Practices," Herbert Emmerich, Associate Director of Public Administration Clearing House

"Federal Account-Keeping," John B. Payne, Head of the Control Accounts and Reports Section of the Department of Agriculture

"Proposals for Changes in the Federal Accounting System," Harvey Mansfield, Professor of Political Science, Stanford University

DISCUSSION:

Lloyd Morey, University of Illinois

E. F. Bartelt, Commissioner of Deposits and Accounts, United States Treasury

T. Coleman Andrews, T. Coleman Andrews and Company, Richmond, Va.

Carl Chatters, Managing Director, Municipal Finance Officers' Association

Third Session—6:30 P.M. Annual Banquet and Business Meeting

Reports of Officers and Committees

Fourth Session—9:30 A.M., December 29

CHAIRMAN: Ralph C. Jones, Yale University

TOPIC: Controllership Problems

PAPERS:

"What is Controllership?" Speaker and discussion leader to be announced

"Training for Controllership," W. P. Fiske, Massachusetts Institute of Technology

DISCUSSION:

Ross G. Walker, Harvard University

Fifth Session—2:00 P.M., December 29

CHAIRMAN: Carman G. Blough, Arthur Andersen & Co., Chicago, Illinois

TOPIC: Accounting Principles

PAPERS:

"Fixed and Variable Costs," Robert L. Dixon, Jr., University of Chicago

"Debt Discount and Expense," Warner H. Hord, Tulane University

"A New Form of Funds Statement," H. L. Kunze, University of Wisconsin

"Should Obsolescence be Separately Accrued?" C. A. Moyer, University of Illinois

"Treasury Stock," Calvin H. Rankin, University of Pennsylvania

THE ACCOUNTING REVIEW

VOLUME XIV DECEMBER, 1939 NUMBER 4, PART 2

MEMBERSHIP LIST

NOVEMBER 15, 1939

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The ACCOUNTING REVIEW

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Correction: In the September issue of The REVIEW it was stated that Warner H. Hord holds an M.B.A. degree from Howard University. This should have read Harvard University.